

Pic River Ojibway Forest Independent Forest Audit Report 2001-2006

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Prepared by:



Thunder Bay, Ontario

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ON THE COVER A Free-To-Grow jackpine plantation on Deadhorse Road.

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1.0 Executive Summary

This Report presents to the public and the auditees the findings of the Independent Forest Audit carried out on the Pic River Ojibway Forest for the activities which were implemented during the period April 1, 2001 to March 31, 2006. The Forest was managed by Great West Timber Limited (GWTL) during this time. The Pic River Ojibway Forest is located in the Ministry of Natural Resources (MNR) Northwest Region.

MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario (2003) and the Crown Forest Sustainability Act (1994) require that all Crown forests in Ontario undergo an Independent Forest Audit every five years. Regulation 160/04 of the Crown Forest Sustainability Act sets out the specific requirements for conducting the audits.

Great West Timber Limited and MNR's Nipigon District were the principal auditees. The other auditees were the two Overlapping Licensees (OLs), namely Pic River Development Corporation and Ken Dooley and Sons Logging. The audit was conducted by KBM Forestry Consultants Inc. using the MNR's 2006 Independent Forest Audit Process and Protocol.

The purpose of the Independent Forest Audit is to:

- Assess the extent of forest management planning compliance with the Forest Management Planning Manual and the Crown Forest Sustainability Act (CFSA) 1994
- Assess the extent of forest management activities compliance with the CFSA and with the Forest Management Plans, the manuals approved under the CFSA and the applicable guides
- Compare planned versus actual forest management activities
- Assess the effectiveness of forest management activities in achieving audit criteria and forest management objectives
- Assess the licensee's compliance with the terms and conditions of the Sustainable Forest Licence
- Assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit

The Report deals with the eight Guiding Principles of the Audit Protocol in sequence and they are:

- Commitment
- Public Participation
- Forest Management Planning
- Plan Implementation
- System Support
- Monitoring
- Achievement of Management Objectives
- Contractual Obligations

As a result of the audit findings, the team has made 24 Recommendations, twelve Suggestions, and one Best Practice award for the development of opportunities for a local First Nation. Recommendations arise from audit team findings on process and implementation non-conformances, or may be developed to address situations in which the audit team identifies a significant lack of effectiveness in forest management activities.

Ten of the Recommendations are directed solely at GWTL, six solely at MNR, four are directed at GWTL and the OLs jointly, two are jointly directed to GWTL and MNR, and two are jointly directed to GWTL, MNR and the OLs. Of the twelve Suggestions, four are made to MNR, five to GWTL, two jointly to MNR and GWTL and one jointly directed to GWTL and the OLs. Suggestions are less serious in nature and provide advice for improving particular aspects of forest management.

Of the 24 Recommendations, the final Recommendation (No. 24) is to the Minister on licence extension. Sixteen of the remaining Recommendations deal with deficiencies in meeting the management planning and reporting process. Of the 16 Recommendations, seven involve non-compliance with the Forest Management Planning process, and nine deal with deficient reporting and the process of plan monitoring and compliance. Over and above that, there are two Recommendations of a more serious nature on utilization and clean-up prior to silvicultural operations, and lastly five of which focus on implementation of operations. It is on these latter five crucial Recommendations that immediate action must be taken. The team has used the term 'crucial' to stress their importance and to establish what they consider a priority for action.

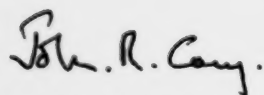
There were three important exceptions to meeting the requirements of GWTL's contractual obligations over the last five years as set out in its SFL document. These exceptions were the failure to meet some of the previous IFA's Recommendations, non-compliance with the FMP and the Forest Compliance Handbook, and the lack of measurement of regeneration success.

As stated at the closing meeting of the site visit, the audit team was very concerned about the same five crucial Recommendations, including the exceptions to GWTL's contractual obligations mentioned directly above. The team remains concerned. Specifically, these five Recommendations deal with harvest block suspensions (Recommendation 8), that the FMP's birch strategy is strictly followed (Recommendation 9), roadside slash is reduced (Recommendation 12), silvicultural effectiveness of the renewal program be assessed (Recommendation 14) and ensuring that the outstanding Free-To-Grow situation is quickly resolved (Recommendation 18). Two of these Recommendations are directed at GWTL, one to MNR, one jointly to MNR and GWTL and one jointly directed at GWTL and the OLLs.

Should these five crucial Recommendations not be addressed effectively, the next IFA will, in the audit team's opinion, raise very serious concerns about the Forest's sustainability.

In order to forestall these concerns, the audit team concluded and has recommended that the decision on extension of SFL Licence No. 542440 be deferred until March 31st 2010 at which time an independent verification will be made to establish that satisfactory progress has been made with regard to the five crucial Recommendations noted above in this Report. The verification should be efficient, economical and brief. It should be confined to the five crucial recommendations only. Once this verification has been made, the audit team recommends that the Licence be extended to its full term of March 2028. Should satisfactory progress not be made, the team does not recommend extension.

The audit team wishes lastly to point out that while the southerly portion of this Forest is topographically rugged and has presented operational challenges, the team looked at the rolling more central and northerly parts of the Forest as well. The team would like to emphasize that as we travelled on-the-ground and as we flew the whole area by helicopter beyond the ground field stops, we saw a healthy productive forest. Through these field observations, we have concluded therefore that overall, the growing forest and the habitat it provides, are meeting standards of sustainability.



On behalf of the Audit Team.

2.0 Introduction

This audit report presents the results of the Independent Forest Audit (IFA) for the Pic River Ojibway Forest (the Forest). The audit was conducted by KBM Forestry Consultants Inc. (KBM) for the period from April 1, 2001 to March 31, 2006. The audit term coincided with the term of the Forest Management Plan (FMP) in effect at that time. The audit team reviewed implementation of activities associated with that 2001-2006 FMP. During the final two and a half years of the audit term, the subsequent 2006-2011 FMP was developed. The audit team reviewed the planning activities associated with that 2006-2011 FMP.

The Forest is managed under Sustainable Forest Licence (SFL) No. 542440 held by Great West Timber Limited (GWT). As per Appendix F of the licence, there were two overlapping licensees (OLL) on the Forest: Ken Dooley and Sons Logging (KDSL) and Pic River Development Corporation (PRDC). The business plan identified that each party held a one-third partnership in the management and operation of the Forest.

The Forest is located in the Ministry of Natural Resource's (MNR) Northwest Region and within the MNR Nipigon District. It is administered from an MNR area office in Terrace Bay.

2.1 Audit Process

2.1.1 Purpose

The Independent Forest Audit Process and Protocol¹ (IFAPP) was developed by MNR to provide a comprehensive and consistent method of evaluating forest management activities on Crown land. The IFAPP states that the purpose of an IFA is to:

- Assess the extent of forest management planning compliance with the Forest Management Planning Manual (FMPM²) and the Crown Forest Sustainability Act (CFSA) 1994;
- Assess the extent of forest management activities compliance with the CFSA and with the FMPs, the manuals approved under the CFSA and the applicable guides;
- Compare planned versus actual forest management activities;
- Assess the effectiveness of forest management activities in achieving audit criteria and forest management objectives;
- Assess the licensee's compliance with the terms and conditions of the SFL; and,
- Assess the effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit.

2.1.2 Audit Process Overview

The IFAPP contains 331 audit procedures that are potentially applicable to the Forest. Most of these procedures pertain to plans prepared under the requirements of the FMPM. The audit procedures serve as a framework to provide a structured approach to evaluating whether forest management activities meet the requirements governing forestry practices on Crown land in Ontario. Since the IFAPP contains procedures that pertain to the SFL holder, OLLs, and MNR, all parties are auditees.

A previous IFA was conducted for the Forest in late 2001 for the 1996-2001 term. The implementation of the Recommendations contained in that audit was examined during the course of this audit.

¹ OMNR 2006. Independent Forest Audit Process and Protocol. 26 pp. + Appendices.

² OMNR 1996. Forest Management Planning Manual for Ontario's Crown Forests. Toronto. Queen's Printer for Ontario. 452 pp.; and OMNR 2004. Forest Management Planning Manual for Ontario's Crown Forests. Toronto. Queen's Printer for Ontario. 440 pp.

The audit process for the Forest consisted of six components:

- A) Audit Plan³: KBM prepared an audit plan that described the schedule of audit activities, audit team members and participants, and auditing methods. The audit plan was submitted to MNR, GWTL, the Forestry Futures Committee (FFC), and the Terrace Bay Local Citizens Committee (LCC).
- B) Public Survey: KBM prepared a one-page public survey that was distributed to all organizations and to all names on the District mailing list provided by MNR. KBM usually samples one-third of this list, but for this Forest the District mailing list is short enough to allow a full census. In addition, the public notice was posted and available for download from KBM's web site (www.kbm.on.ca). The purpose of the survey was to solicit public input and to provide respondents with an opportunity to identify and discuss any site-specific concerns on the Forest. A copy of the survey is located in Appendix F. Notices were placed in five newspapers (Nipigon Gazette, Terrace Bay/Schreiber News, Marathon Mercury, Manitouwadge Echo, and the Wawatay News) soliciting public input on forest management activities on the Forest for the period under audit. A copy of the public notification is found in Appendix F. There were nine responses to the survey process. A summary is presented in Appendix E.

During the pre-audit visit on the evening of August 15, 2006, members of the audit team met with the Terrace Bay LCC. The purpose of the meeting was to introduce the audit plan to the LCC and determine how its members wished to be consulted. This meeting, and further correspondence, resulted in a number of comments being provided to the audit team regarding forest management. Two members of the LCC expressed interest in participating in various portions of the field audit, but both were unable to attend.

- C) Field Site Selection: Pre-audit meetings were held in Manitouwadge from August 15 to 17, 2006. The audit team used this time to conduct the preliminary site selection process. Annual Work Schedules (AWSs), Annual Reports (ARs) and other data sources provided by MNR and GWTL were used to determine the amount and types of forest operations conducted on the Forest during the audit term. A stratified random sample of sites was then chosen to ensure that selected sites were representative of the activities conducted on the Forest during the audit term. Figure 1 presents the locations of the field sites that were audited.

KBM committed to a sampling range of between 10% and 25% of key field activities and operations conducted on the Forest, depending upon the type of activity. Table 1 presents the sampling intensity of the field visits completed on the Forest. The objectives of the field site visits were to confirm that activities were conducted according to plan, that they conformed to provincial laws, regulations, and guidelines, and that they were effective.

- D) Pre-audit Document Review: Prior to the site visit, the audit team reviewed documents provided by GWTL and MNR including: the Pic River Ojibway Forest 2001-2006 FMP, the 1996-2001 Report of Past Forest Operations (RPFO), 2001/02-2005/06 AWSs, the 2001/02-2004/05 ARs, and the Comparison and Trend Analysis of Planned versus Actual Forest Operations (Trend Analysis Report) prepared by GWTL as a requirement of the IFA.
- E) On-Site Audit: The opening meeting was held in Manitouwadge on September 25, 2006. The audit team conducted interviews and field visits from September 25, 2006 to October 3, 2006 including discussions with members of the Terrace Bay LCC, First Nations representatives, other key stakeholders, members of the public, and staff from GWTL, MNR and the OLLs. The audit team examined documents, records, and maps at the GWTL and MNR office and examined sufficient sites to exceed the sample intensity required for an IFA.

³ KBM Forestry Consultants Inc 2006. Pic River Ojibway Forest Independent Forest Audit Plan. 15pp+appendices

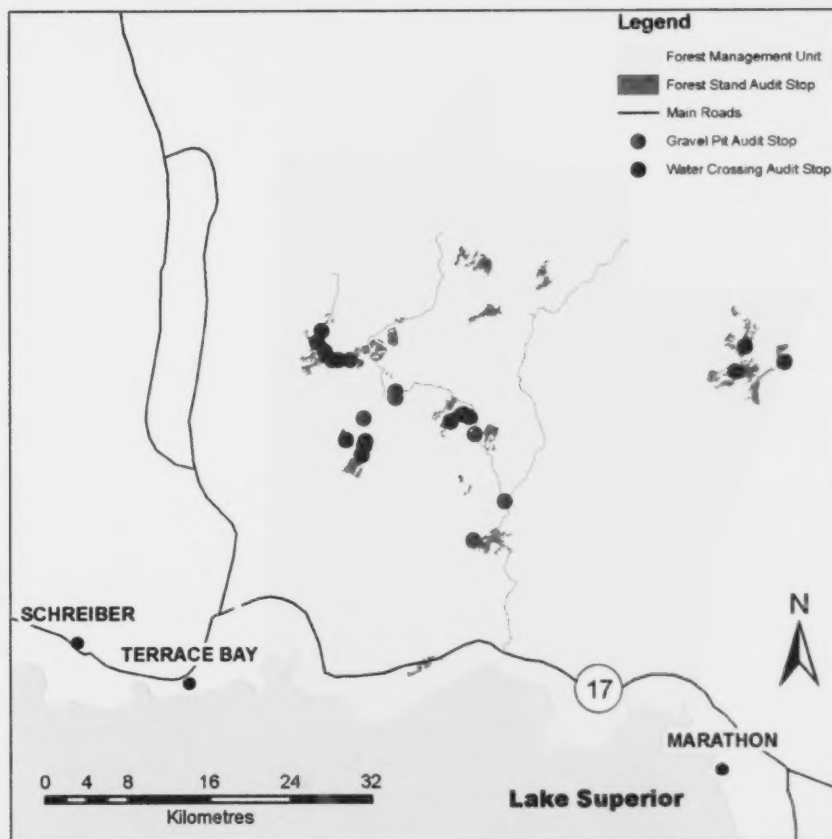


Figure 1. Audit field site locations.

Some of the selected sites were accessed by helicopter and all but one of the Free-To-Grow (FTG) blocks were assessed from the air. The helicopter provided rapid access and an aerial view to verify operational compliance with plans and reports. An observer from FFC accompanied the auditee and audit team to blocks accessed by road. This arrangement allowed for informal interviews and discussions about findings during the field audit.

A closing meeting for the audit was held in Marathon on Tuesday, October 3, 2006. This meeting provided a forum for the audit team to present and discuss preliminary audit results with GWTL and MNR.

- F) Final Report: In the final document produced by the audit team, the results are presented in conjunction with a brief description of the audit process and the forest licence area under review. An important distinction is made between Recommendations and Suggestions within the report. Recommendations draw attention to deficiencies in forest management that require corrective action. In most cases, Recommendations are the result of non-conformance to a law or policy, or specify a lack of effectiveness in forest management activities. Recommendations must be addressed in an Action Plan developed by the licensee and MNR as per Appendix E of the IFAPP. Suggestions are less serious in nature and provide advice for improving particular aspects of forest management. Auditees are not required to address Suggestions in the Action Plan, although the IFAPP encourages them to do so. Best Practices will be identified if highly effective or novel approaches to various aspects of forest management are observed. Similarly, applications of established management approaches which achieve remarkable success may represent Best Practices.

Table 1. Audit sampling intensity.

Activity	Total** Area/Number (2001-2006)	Area/Number Sampled	Percent Sampled
Harvest	4,928 ha	2,167 ha	44
Renewal and Maintenance	14,828 ha	4,998 ha	34
Free-To-Grow****	8,426 ha	1,257 ha	15
Area of Concern (AOC) Categories*	9	5	56
Gravel Pits	24	7	29
Road Construction	46 km	28 km	61
Road Maintenance	undetermined	85 km	N/A
Water Crossings	58	16	28
Specified Procedures Review***	1,134 ha	264 ha	23

* AOC categories refer to the different types of AOCs present on the Forest. Examples included riparian areas, cool water fisheries, moose aquatic feeding areas and osprey nests. Numerous AOCs were associated with most sites selected for review of harvest and renewal operations. In addition, some sites were specifically selected to represent a cross section of AOCs.

** Amount of activity in 2005/06 was estimated as the AR was not yet due.

*** The Specified Procedures Review involved the verification of maps, records, and fieldwork associated with Forest Renewal Trust Account expenditures for 2004/05.

**** Total FTG area is derived from the unapproved 2005/06 AR and the data withdrawn from the 2003/04 AR.

2.1.3 The Audit Team

The audit was conducted by an independent audit team assembled by KBM Forestry Consultants Inc. under contract with MNR. The audit team consisted of seven members:

- John Cary, RPF, Lead Auditor
- David West, RPF, Planning Auditor
- Brad Chaulk, RPF, Harvesting Operations Auditor
- Bill Wiltshire, RPF, Silviculture Auditor
- Rod Seabrook, CEA (SFM), EMS (LA), Wildlife/Ecology Auditor
- Keith Hautala, Forest Modelling Auditor
- Ben Newman, RPF, Audit Secretariat

Audit team members and their responsibilities are described in Appendix B.

2.1.4 Guiding Principles

The IFAPP identifies the components of the audit process. There are eight guiding principles within the audit protocol (Appendix C). Each principle contains a series of criteria that guide the audit team in its assessment of achievement toward a given principle. Under each criterion, a number of procedures detail the assessment of auditee compliance and effectiveness. KBM assigns each of the applicable procedures to an auditor who, in turn, examines the evidence for conformity with the procedure.

2.2 Forest Management Context

2.2.1 Location of the Pic River Ojibway Forest

The Forest is located in MNR's Northwest Region, within the Terrace Bay area of the Nipigon District. The Forest extends inland from the north shore of Lake Superior for approximately 60 km, with the towns of Terrace Bay, Marathon and Manitowadge located just outside its boundary (Figure 2).

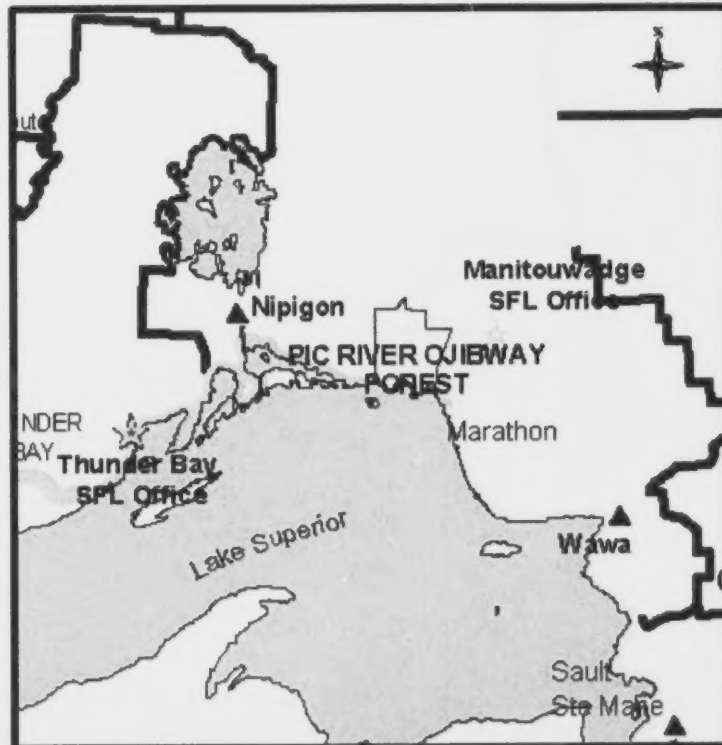


Figure 2. Location of the Forest (Map supplied by GWTL)

2.2.2 Pic River Ojibway Forest Overview

The following overview was derived from the 2006-2011 FMP for the Forest. The SFL was signed by GWTL in 1998. This signalled the transfer of the Steel River Crown Management Unit to the Pic River Ojibway Forest. The Forest is 239,269 ha with 191,224 ha being managed Crown productive forest (Figure 3). The distribution of forest units (FU) within the production forest available for harvest (189,163 ha) is illustrated in Figure 4. A significant amount of this area is barren and scattered or recently depleted (approximately 23%). The Forest is entirely within the Boreal forest region and is dominated by mixed stands of black spruce, trembling aspen, and white birch. Lesser amounts of jack pine, balsam fir and white spruce are also found. Two large fires (Nipigon 75 and Deutzia) and a major spruce budworm outbreak occurred during the last two decades. These events, combined with forest management activities, have led to the current age class structure of the Forest as shown in Figure 5.

Along Lake Superior, the Forest's terrain is very rugged with many rock outcrops and cliffs. However, these rock outcrops become much less prevalent and yield way to more gently rolling glacial till, eskers and outwash areas after some 20 km away from the lake. A significant amount of this southerly terrain has been classified as severe and has limited the opportunity for conducting forest management operations.

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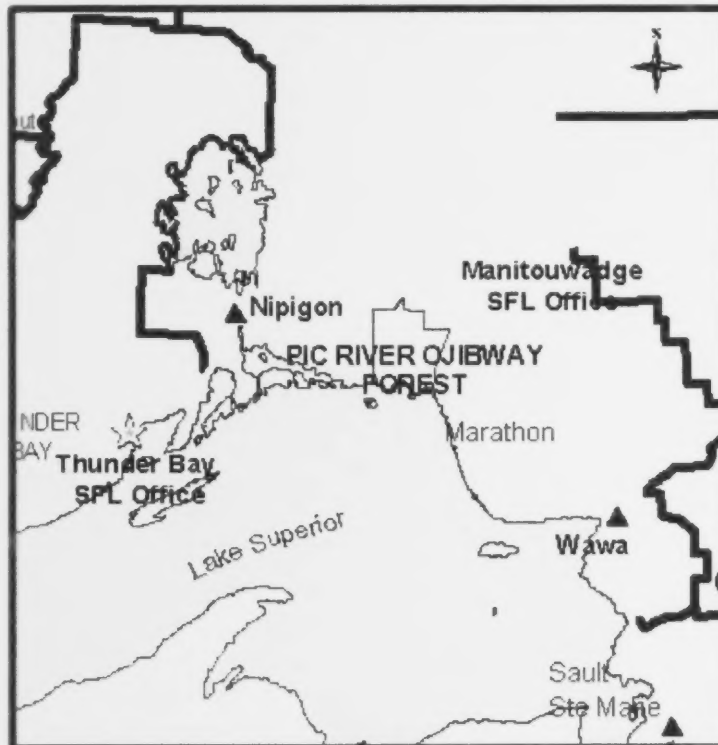


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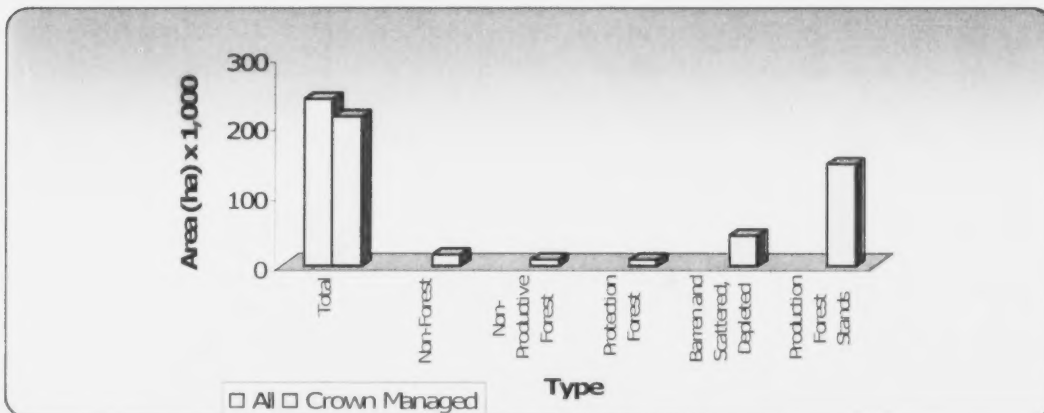


Figure 3. Forest Area by Land Type. (Source: 2006-2011 FMP Table FMP-1)

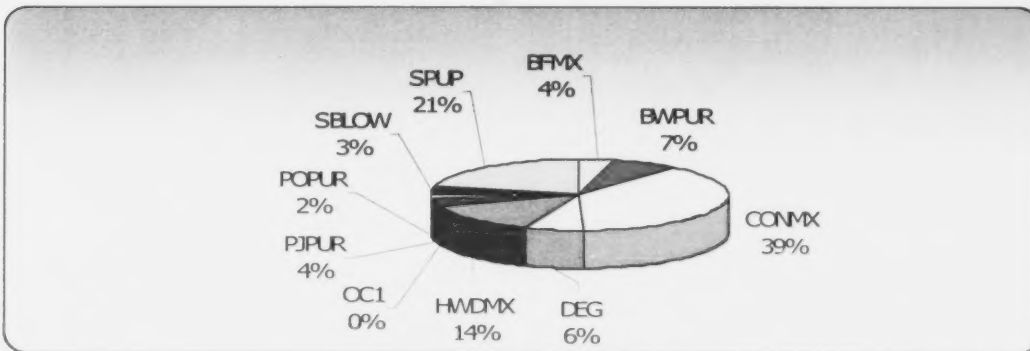


Figure 4. Available Managed Crown Productive Forest Area by Forest Unit. (Source: 2006-2011 FMP Table FMP-9)

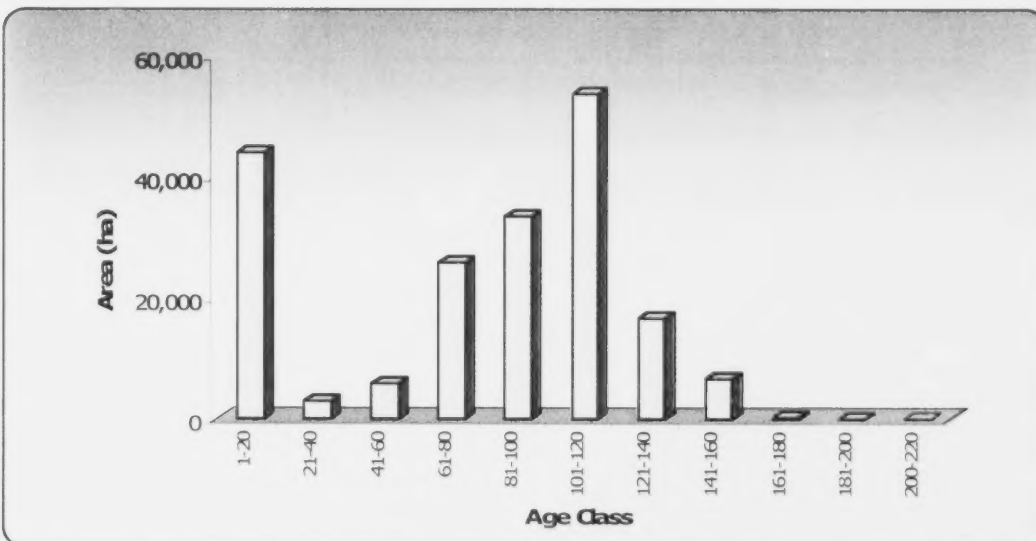


Figure 5. Age-Class Distribution of Crown Managed Production Forest. (Source: 2006-2011 FMP Table FMP-9)

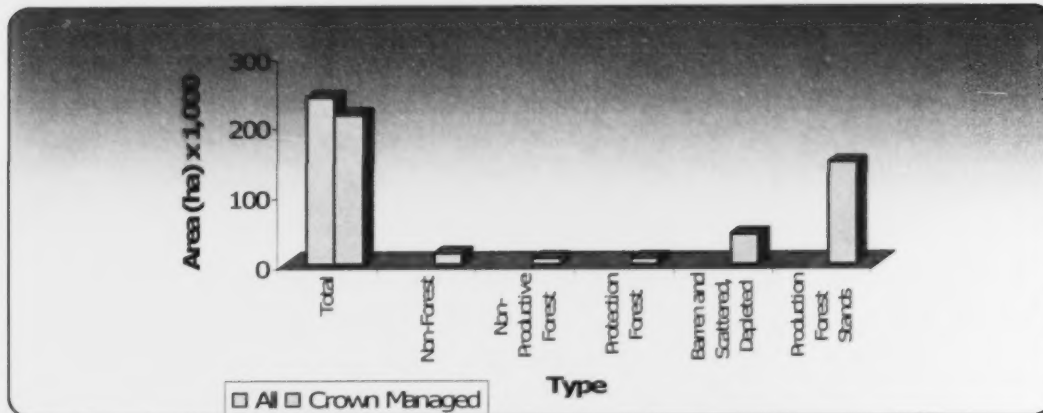


Figure 3. Forest Area by Land Type. (Source: 2006-2011 FMP Table FMP-1)

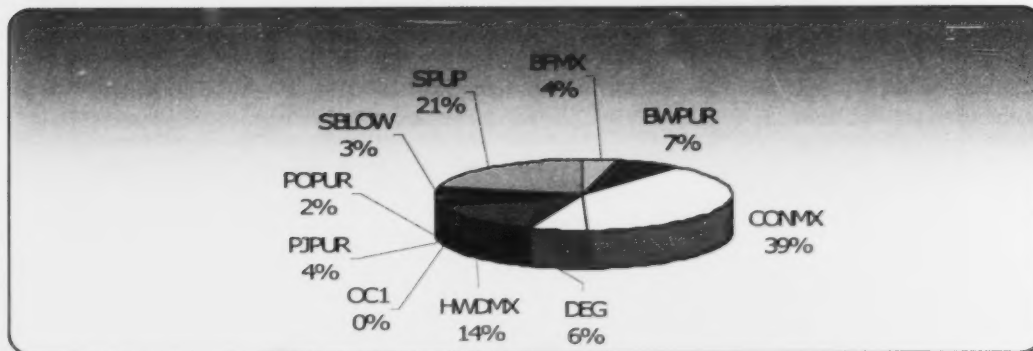


Figure 4. Available Managed Crown Productive Forest Area by Forest Unit. (Source: 2006-2011 FMP Table FMP-9)

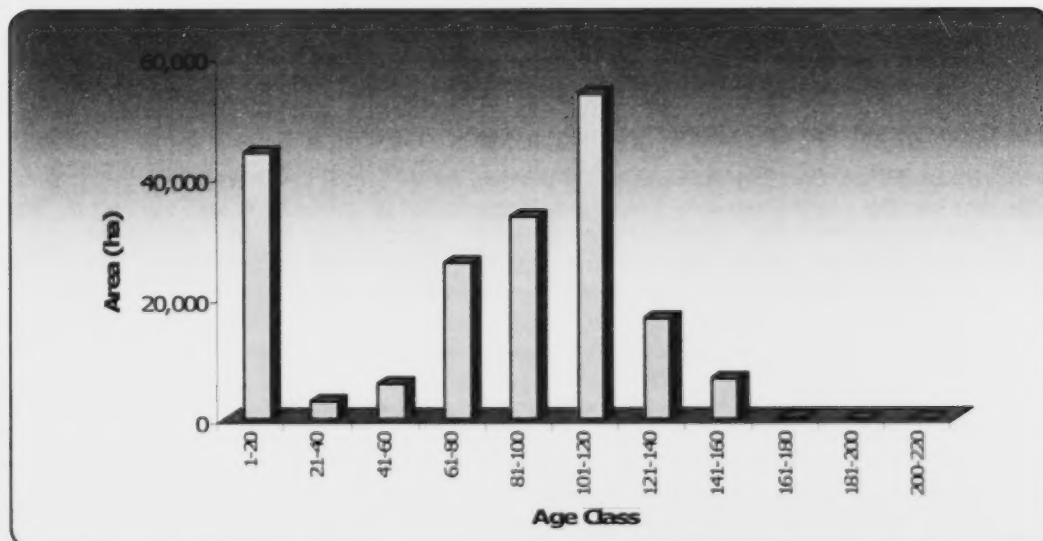


Figure 5. Age-Class Distribution of Crown Managed Production Forest. (Source: 2006-2011 FMP Table FMP-9)

2.2.3 Issues Impacting Forest Management

The IFAPP requires a review of High Priority Aspects (HPAs) of the auditees' systems or activities before the site visit takes place. HPAs can include significant management challenges that are inherent to the Forest (e.g., presence of woodland caribou or extensive areas of sensitive soils), or can be specific issues that have arisen during forest management planning or plan implementation (e.g., conflicts with other forest users over proposed forest management activities).

The audit team assembled a list of potential HPAs from a review of the FMPs, the previous IFA of the Forest, and discussions held with representatives of both GWTL and MNR. Based on this information the following HPAs were identified for the audit:

- 1) Achievement of Harvest and Renewal Activities. Harvest, renewal and FTG assessment activities were underachieved during the 1991 to 2001 period. The same trend exists to date except for an increase in tree planting activities. The amount of bypass and the rationale used to justify it continues to be an issue, as noted in the previous IFA.
- 2) Management of Access to the Forest. There are difficulties in balancing the access goals of the multiple stakeholders on the Forest. For example, the issue of road access, road maintenance, restricted access and road abandonment has been contentious. Furthermore, the previous IFA recommended that the LCC include better representation of the stakeholders influenced by access management decisions.
- 3) Forest Inventory
 - (i) The 2006-2011 FMP discusses the difficulty in implementing SGRs due to a lack of agreement between MNR and GWTL on ecosite mapping. Efforts were made to retype the 1998 photos and add an ecosite attribute to the forest resources inventory (FRI).
 - (ii) Since 1991, the actual scaled volume per hectare harvested has consistently been much less than the volume estimates projected from the FRI and growth and yield tables.
- 4) Values Information Adequacy. The lack of resource information values other than timber, particularly for critical fish habitat, has been an issue in forest management planning. In addition, MNR's identification of ground-water recharge zones on the Forest has resulted in some planning uncertainties.
- 5) Roadside Slash. Excessive roadside accumulations of slash have been reported or discussed in the previous two RPFOs and FMPs, as well as the latest IFA. The piles are unsightly and occupy productive growing area.
- 6) Wood Supply. Wood supply directives contained in Appendix E of the SFL document are at odds with the FMPs. Projections in the 2001 FMP, developed using SFMM, were incapable of meeting the poplar requirements and those projections showed that the supply of poplar will decline for decades to come. The 2006 FMP modelling projections again show poplar commitments as unattainable.
- 7) Compliance Reporting. The number of MNR reports may be inadequate. This could lead to compliance issues on the Forest. There is no MNR Compliance Officer for the Forest which may have led to under-reporting. GWTL staff and overlapping licensees are currently responsible for on-the-ground inspections.

The audit team examined these aspects during the course of the audit and they are referred to in the body of this report in varying detail.

3.0 Summary of Audit Findings

3.1 Commitment

GWTL and MNR had approved policies to guide their commitment to sustainable forest management. During the audit the GWTL policy was being updated to include the Sustainable Forestry Initiative principles of the American Forest and Paper Association. GWTL distributed its policy and operational control procedures using an intranet system in the Thunder Bay office, bulletin boards in Thunder Bay and Manitouwadge, and version 2.0 of its Operator Handbook (December 2005).

GWTL and MNR completed compliance inspections of operations during the audit term. GWTL completed inspections on all GWTL and OLL operations while MNR completed spot inspections and follow-up inspections where GWTL found non-compliances. Some joint inspections also occurred.

Although there were some problems with the compliance program completed by GWTL (see Section 3.6.1 General Monitoring - Compliance), they followed their Five-Year Compliance Plan and Annual Plan of Action for each year during the audit term; this demonstrated a commitment to sustainable forest management. MNR also demonstrated a commitment to sustainable forest management. However, in the final two years of the audit term MNR did not complete the minimum number of inspections as specified in its Annual Compliance Operations Plan (ACOP). As a result, a Recommendation is directed at MNR to complete an appropriate number of inspections (see Section 3.6.1 General Monitoring - Compliance).

3.2 Public Participation

3.2.1 Local Citizens Committee

The Terrace Bay Resource Advisory Committee has been in place since 1994 and functions as the LCC for the Pic River Ojibway Forest. The Committee was in place throughout the audit period, performing all the required functions of the LCC.

During the audit period, the Committee undertook a number of initiatives to attract new members to replace vacant positions. Efforts included advertisements in local media and targeted correspondence to area interest groups and specific individuals. These efforts were successful at maintaining membership, but not at attracting members to fill voids in representation.

At present, the Committee is operating according to its original Terms of Reference. With the introduction of the 2004 FMPM, there was a requirement for MNR, under the direction of the District Manager, to lead the LCCs through a membership review to reflect the sector representation identified in the manual. The Terms of Reference were also to be updated to reflect the roles and responsibilities outlined in the manual. To date the Terms of Reference have not been reviewed or updated in accordance with the 2004 FMPM. When membership was compared to the recommended areas of representation there were a number of areas for concern. Native communities, municipalities and mining were represented, but the current representatives did not attend regularly. Additional representation from other communities associated with the Forest should be encouraged. Although membership records indicated that there is representation for both tourism and anglers/hunters, these members have not attended a meeting in the last two years. Woods workers and local business outside the forest industry are not represented at this time. Of particular concern was the current vacancy of the LCC chair and the difficulty encountered in finding a replacement.

MNR provided good support to the Committee during the audit term. The Area Forester attended all LCC meetings and understands the issues facing it. During the audit both MNR and GWTL indicated that there was a potential for this SFL to be amalgamated with an adjacent unit. Amalgamation could affect this Committee and may even provide an opportunity to re-think its membership and mandate.

Recommendation 1: The Ministry of Natural Resources must ensure that the Local Citizens Committee reviews and updates the Terms of Reference and membership to meet the requirements of the 2004 Forest Management Planning Manual.

3.2.2 FMP Standard Public Consultation Process

The methods used to communicate with the public complied with the 1996 and 2004 phase-in requirements of the FMPM for standard public consultation. The Nipigon Gazette, Terrace Bay/Schreiber News, Marathon Mercury, and Manitouwadge Echo were used for all FMP standard public consultation notices. The Wawatay News was used for the Invitation to Participate, but discontinued thereafter. The planning team decided that the bi-weekly publication of that newspaper was insufficient to meet its needs. Aboriginal consultation was continued using television ads.

The public consultation process for the development of the 2006-2011 FMP generated few comments and no significant issues. The District mailing list contains 208 entries due to the remote situation of the Forest. Open houses were not well attended. The plan author suggested that timing of these may have been a factor. The First Information Centre was held just prior to Christmas and the Second Information Centre was held in the early spring. Public correspondence was responded to promptly. The issue resolution process was not required, nor were there any requests for individual environmental assessments (EA).

3.2.3 Native Peoples Consultation

There were four First Nations identified in the 2006-2011 FMP Terms of Reference as being adjacent to the Forest and requiring an invitation to participate in the preparation of the plan. These included Long Lake 58 First Nation, Pic River First Nation, Pays Plat First Nation and Ginoogaming First Nation. Invitations were sent to all four First Nations to which three responded. Pic River, Ginoogaming and Pays Plat requested and were granted a position on the planning team. Long Lake 58 First Nation never responded, however notices and announcements continued to be sent as required by the FMP process. Although Ginoogaming First Nation was offered a place on the planning team they did not participate further during the plan preparation and consultation.

Pic River First Nation and Pays Plat First Nation both provided representatives for the planning team and remained active during the process. At the request of both First Nations, information centres were held in the communities as part of the specific First Nations consultation process. Through discussion at planning team meetings it was determined that notices in the Native language were not necessary. Representatives from the communities attended planning team meetings and community information centres were well attended. There were no issues raised with respect to the development of the FMP from the First Nations.

The Native Background Information Report and the Report on the Protection of Identified Native Values were both updated from the 1999 reports that were produced for the 2001-2006 FMP.

3.2.4 Annual Work Schedules Public Inspection

A public notice for the inspection of an AWS is required 15 days in advance of the commencement of operations and the auditees met all requirements of the FMPM. Aerial herbicide notices were often combined with the AWS notices, and subsequent seven-day notices were also advertised. There were no insect pest management activities or high-complexity prescribed burns during the audit period.

3.3 Forest Management Planning

3.3.1 Planning Team Activities

The audit team reviewed planning team activities as they related to the production of the 2006-2011 FMP. The Terms of Reference defined the membership of the planning team, and their roles and responsibilities. It also outlined a detailed timeline and schedule for the production of the plan. The Terms of Reference were approved by the District Manager and Regional Director as required.

Although the Terms of Reference were developed efficiently, it took an exceptionally long period to produce and approve them. The Invitation to Participate was issued March 15, 2004 and the Terms of Reference were approved six months later on September 13, 2004. While the 1996 FMPM does not preclude the initiation of the public consultation process prior to the approval of the Terms of Reference, the 2004 FMPM does.

Suggestion 1: The Ministry of Natural Resources and Great West Timber Limited should ensure that the Terms of Reference for the 2011-2021 Forest Management Plan are approved prior to the issuance of the First Public Notice.

The MNR forester and the plan author were the co-chairs of the planning team. They were Registered Professional Foresters at the time of plan production as confirmed by the Ontario Professional Foresters Association. Professional members of the planning team included the MNR Area Biologist, GWTL GIS analyst and two MNR technicians. The planning team also included representatives from First Nation communities, OLLs and the LCC. Planning team meetings were held approximately once a month.

Both MNR and GWTL correspondence binders were well organized and complete. All correspondence and comments received were responded to promptly. There was very little public comment regarding the production of the 2006-2011 FMP. Evidence suggests that all required consultation efforts were used including First Nations consultation. The lack of any significant tourism interests on the Forest and no community in close proximity accounted for the generally low level of interest.

Members of the planning team who were interviewed felt that they had each performed well and were complementary of each other. Plan preparation began late and fell nearly nine months behind schedule, primarily due to issues around the development of the planning inventory and delays in the production and approval of Terms of Reference that all parties could agree to. A change in plan author by GWTL resulted in improved performance and the new plan author deserves credit for getting the plan completed on time. Changing plan author or any other key member of the planning team in mid-plan tends to disrupt and cause delay in plan preparation. While in this case the opposite is true, both MNR and GWTL should make every effort to provide continuity in planning staff when developing future plans. If staffing resources are changed, then adequate support and management involvement should be provided to ensure a smooth transition.

3.3.2 Resource Stewardship Agreements

During the preparation of the 2006-2011 FMP, letters were sent to licensed tourism facilities on the Forest inquiring if there was interest in developing Resource Stewardship Agreements (RSAs). There were only nine tourism businesses on the Forest of which seven catered to the travelling public on the Trans Canada Highway. The remaining two were resource based operations and accounted for the only responses received.

Discussions were held with both operations to determine the concerns and values that each had on the Forest. It was determined early in the process that one would not be impacted during the plan since no operations were to be scheduled within its area of interest. The parties agreed that the operations would be kept informed about the plan's progress and apprised of any changes. Discussions were held with the remaining operator and as a result of discussion between the parties it was decided that formal RSAs were not required. The primary area of interest was harvest in the vicinity of a moose hunting operation. Access control plans were initiated in the 2001-2006 FMP and both parties believed that maintaining these conditions in the 2006-2011 FMP would be adequate. No RSAs were signed during the audit period.

The 2006-2011 FMP included the required statement confirming the commitment to maintain the viability of the tourism industry by protecting tourism values through the application of the Management Guidelines for Forestry

and Resource-Based Tourism⁴ and the use of RSAs as one method of protecting and sustaining these values. The FMP also included a commercial tourism strategy that was developed by the planning team in order to meet the socio-economic objectives.

3.3.3 Sources of Direction

During the production and implementation of the 2006-2011 FMP, numerous sources of direction were used by the planning team. These sources included provincial legislation, MNR policies and guidelines, the past IFA, the business plan for the Forest, strategic direction, and land use plans as identified in Section 1.4.1 Sources of Direction and Appendix 16 of the FMP.

AWSs included pertinent information from the 2001-2006 FMP regarding AOC prescriptions and stand level requirements. Most of the direction in the 2001-2006 FMP and AWSs was implemented, except for snag retention, slash management and the white birch strategy. For example, on some of the sites viewed the number of snags did not meet requirements. This was also noted during compliance inspections and resulted in some non-compliance reports. These implementation deficiencies are discussed in Section 3.4.2 Harvest.

3.3.4 Introduction to the Forest Management Plan

The Ontario Environmental Bill of Rights (EBR) requires MNR to prepare a Statement of Environmental Values⁵ (SEV). In developing the SEV, MNR outlines its goals, objectives and strategies to achieve the principles outlined in the EBR. The SEV briefing note was based on two MNR documents, Beyond 2000⁶ and Our Sustainable Future⁷, and described the links between the FMP and those guiding documents. The index to the EA⁸ components of the plan also complied with the FMPM.

3.3.5 Management Unit Description

The 2001-2006 FMP contained an adequate description of the geology, soils and sites of the Forest. A thorough discussion was included concerning the implications of the severe topography and shallow soils which characterize the southern part of the Forest. The FMP also described the current and historic forest conditions and other forest resources of the Forest adequately.

The impression given of the Forest in the FMP and associated documents is one of very severe topographic conditions which are limiting to forest operations. While this is clearly the case in the southern portion of the Forest adjacent to Lake Superior, the audit team was struck by the fact that much of the area observed during the field audit, especially as distance from the Lake increases, is both productive and better suited to forest management activities. The discussion of these prime forestry lands is limited in the FMP.

There was a socio-economic profile provided in the FMP and it met the minimum requirements. All communities including First Nations were profiled as were several aggregations of communities. Overall, the analysis tended to be more of a regional analysis rather than management unit focused. Information was drawn from the 2001 Census and Ministry of Northern Development and Mines, Regional Economic Development Branch community profiles. Information on non-industrial uses of the Forest was weak which is not surprising given the low incidence of these uses on this Forest.

The FRI was used as a basis for the planning inventory (1988 photography, 1992 interpretation). In 1999 the inventory was provided in digital format by MNR and was updated for use in the 2006-2011 FMP by including known harvest and natural depletions, predicted harvest (for 2003-2006) and available FTG information. It was

⁴ Forest Management Branch 2001. Management Guidelines for Forestry and Resource-based Tourism. Ont. Min. Nat. Res., Queen's Printer for Ontario, Toronto, ON.

⁵ Ministry of Natural Resources, 1995. Statement of Environmental Values. Toronto: Queen's Printer for Ontario.

⁶ MNR. 2000. Beyond 2000. 20pp.

⁷ MNR. 2005. Our Sustainable Future. 21pp.

⁸ Ministry of the Environment. 2003. Declaration Order regarding MNR's Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario. 48 pp.

approved for use after the March 15, 2004 Invitation to Participate. However, drafts were available prior to that. The final planning inventory was approved on June 2, 2004. Subsequent changes were made in February 2005 as a result of the decision to withdraw the FTG results from the 2003 survey season (see Section 3.6.1 General Monitoring - Silviculture).

The FMP contained a description of the Species at Risk found on the Forest. This included examples such as: forest-dwelling woodland caribou (boreal population), bald eagle, peregrine falcon, Aurora trout, great grey owl and northern brook lamprey.

3.3.6 Objectives and Strategies/Management Alternatives

Objectives and targets in the 2006-2011 FMP addressed forest diversity, socio-economic, forest cover and silviculture topics as required by the CFSA and FMPM. Mandatory management alternatives were analyzed as required by the 1996 FMPM. These included scenarios to test the timber production potential of the Forest with an infinite level of silviculture spending, timber production potential with balanced silviculture spending, and the ability of the Forest to meet anticipated industrial demand. The Natural (Null) scenario, where no harvest occurs and wildfire is the only source of forest depletion and renewal, was used to provide a basis for calculating allowable bounds of variation for some quantitative objects such as wildlife habitat, FU group area representation, and old forest cover.

The FMP management alternatives were analyzed with the Strategic Forest Management Model (SFMM), with results and input assumptions discussed in the FMP text and Analysis Package. Numerous examples of inconsistent reporting of values between the FMP text, FMP Tables, and/or the Analysis package were found by the audit team. In addition, examples of the FMP and/or Analysis Package text incorrectly describing model parameters and results were also discovered.

Examples of inconsistencies included the discussion of the conversion to, and natural rehabilitation of, non-forested areas. In three separate areas of the FMP this aspect of the model was described as representing barren and scattered, tertiary road, and primary road area. Consequently, the reader is unable to clearly ascertain the status of this parameter or its intended function. In reality, this aspect of the model had no impact on barren and scattered areas. Also, if the intent was for the model to account for the future loss of productive forest to primary roads, this was not accomplished due to the conflicting modelling of productive area withdrawals and natural rehabilitation of these same reserves.

Other examples of inaccuracies involved statements regarding the achievement of sustainability targets for the Selected Management Alternative (SMA). The FMP text stated that, "all management alternatives maintain total productive forest area within the estimated BNV [Bounds of Natural Variation] for all forest units" (pg. 140). However, this is not true as the SMA forecasted four FUs outside of the BNV. Other portions of text also incorrectly stated that, "with exception to certain wildlife habitat objectives, all management alternatives were determined to pass the overall test of forest sustainability" (pg. 175) and that, "the only significant difference [between the Null and SMA] is the stability of the BWPUR forest" (pg. 178). These statements failed to acknowledge discrepancies between the SMA and BNV values as they relate to acceptable levels of FU and old growth area. While other portions of the FMP text did speak to these discrepancies, the inconsistent nature of the FMP text was problematic in that the reader was not presented with an accurate description of model composition and results. Overall, greater care must be taken in the next FMP to provide a more accurate and consistent description of the model and its results (see Recommendation 2).

In addition to the factual inconsistencies between the FMP text, tables, and/or the SFMM model, a disconnection between objectives, strategies, and targets and the SMA was observed. Specifically, a limited discussion surrounded the lack of achievement of four FU area targets as presented in Table FMP-13. The FMP justified the forecasted reduction of pure hardwood (POPUR and BWPUR) FUs as there was a corresponding increase in mixed hardwood area. However, the plan objectives and Table FMP-13 are explicitly based on area by FU and not larger, generalized forest groupings. Therefore, the rationale as presented in the FMP largely lacked merit.

The FMP also deemed the deviations in jack pine and upland spruce areas between the SMA and Null as legitimate because these forest areas are currently lower than their historic levels "based on local knowledge" (pg. 179). While the formulating of a historical FU distribution based on best local information was presented in a strategy statement, there was no discussion of this analysis or what the quantifiable FU targets would be if based on local knowledge rather than SFMM-derived Null targets alone (i.e. how much PJPUR forest area should exist on the forest based on local knowledge?) With a lack of quantifiable supporting evidence and limited discussion, rationalization based on local knowledge appeared too vague and inadequate. Also lacking was any documented trade-off analysis on the impacts of implementing the FU targets calculated from the Null.

Overall, a cohesive link between the plan objectives for forest diversity and thorough justification for the underachievement of these targets was notably absent. As they relate to GWTL responsibilities, these issues are addressed in the following Recommendation, but are also discussed in Section 3.3.8 Plan Review and Approval as they relate to planning team and MNR plan review duties.

Recommendation 2: Great West Timber Limited must ensure that all plan documentation provides a consistent, thorough and accurate description of model parameters and results in the 2011-2021 Forest Management Plan.

In addition to the problems with the FMP discussion itself, incorrect values within Table FMP-13 were also discovered. These problems primarily relate to the values presented for the mandatory alternatives and incorrect acceptable levels for FU and old growth area targets. These issues further confound the reader's ability to assess the sustainability of the SMA in relation to other alternatives and correct acceptable limits for multiple indicators. For example, the Table as presented in the FMP indicates that seven FUs failed to achieve the minimum acceptable amount of old growth area for the SMA. However, this is a result of the Table incorrectly stating the minimum values and with corrected values only two FUs fall short of the target level. Given the importance of Table FMP-13 in the assessment of forest sustainability and the breadth of problems noted within it, a specific Recommendation is made to update the FMP with a corrected version.

Recommendation 3: Great West Timber Limited must update the 2006-2011 Forest Management Plan with a corrected version of Table FMP-13.

The Analysis Package described the general methods and information sources used to create the natural succession rules for the model. However, the discussion did not indicate if succession rules were evaluated in terms of pre- and post-succession volumes. The audit team noted that over half of the succession rules resulted in significant volume changes (i.e., greater than $\pm 50\text{m}^3/\text{ha}$ before and after succession points). Forest succession pathways should not result in substantial changes to volumes as they provide a potential source of miscalculation and should be evaluated during model preparation. The observed volume changes were mostly decreases and not increases, and as such were not of large concern given the more limited impact of decreases versus increases. It was also noted that these volume changes did not appear to have a significant impact on the model output as the amount of forecasted succession area was small. Nonetheless, the existence of numerous large volume decreases as a result of succession rules at or near peak yields (e.g. SPUP) were questionable and indicated an area for future improvement.

Suggestion 2: Great West Timber Limited should review model succession rules to ensure that there is agreement between pre- and post-succession volumes during development of the 2011-2021 Forest Management Plan.

Portions of the Forest have existed for long periods without a stand-replacing disturbance, and have developed stand conditions with lower than average and less predictable timber yields. In addition, portions of the Forest with rugged and undulating terrain create limitations to both the access and productivity of these sites. These forest conditions create a challenge for forecasting average timber yield on a forest-wide basis.

The FMP, RPFO, ARs, and Trend Analysis all speak to a discrepancy between forecasted yields and those actually attained. While the current overall forecasted yield in the SFMM model (127 m³/ha) is not dramatically greater than recent historic actual yield (117 m³/ha in 2001-2006 and approximately 100 m³/ha over the previous 15 years combined), specific areas for improvement were noted. In particular, yield curves for the lowland spruce and poplar FUs, with peak yields of 163 and 203 m³/ha respectively, appeared to be overly optimistic.

Also related to this matter was a 2001 IFA Recommendation for improved realism in the planning of forest management activities on the Forest. While two action items for this Recommendation were completed, an action which planned for improved growth and yield information remains incomplete. Given the concerns noted in the above documentation, specific yield curves with high estimates, and an incomplete action from the previous IFA, the audit team makes a Recommendation for continued work in this area.

Recommendation 4: Great West Timber Limited must review growth and yield estimates, Forest Resource Inventory parameters and utilization constraints to ensure that there is consistency between planned and actual volumes during the development of the 2011-2021 Forest Management Plan.

While deficiencies in the modelling and its reporting were discovered, their impact pertains more to the process and the quality of reporting than to on-the-ground effects. The audit team noted that allocations were consistent with forest composition and current modelling deficiencies do not require a change to operations.

The socio-economic impact model (SEIM) analysis was completed by MNR and included in the FMP as required. The audit team examined whether forest operations are adding value to the community. It is apparent from the profile that many communities along the north shore of Lake Superior derive economic benefits from the management efforts on the Forest. There was no effort made to maximize the economic and social benefits or to assess what factors were impacting the benefits and what if anything could be done to improve the situation. The fact that the SEIM analysis does not have a constructive role in the plan gives rise to questions of its utility. It is the opinion of the audit team that the analysis is not provided early enough in the planning process to be adequately utilized in the development of objectives and strategic alternatives. The 2004 FMPM places greater emphasis on the socio-economic conditions on the forest and GWTL and MNR will have to pay much closer attention to this in the next FMP. There were no public comments or concerns expressed regarding the socio-economic analysis.

3.3.7 Operational Planning

The Silvicultural Ground Rules (SGR) in the 2001-2006 FMP were adequately completed. These SGRs were the first to reference ecosites on the Forest. However, they were defined very narrowly and as such there were numerous examples of where an SGR was rendered technically incorrect because of not matching the actual site type in the field. In the 2006-2011 FMP a range of ecosites which are typically representative of the FU were used to define the SGRs. This represented a significant improvement in linking and applying the SGRs to field conditions.

Silvicultural options included in the 2001 SGRs were generally adequate, however in one instance an FMP amendment was completed in order to permit direct planting in the CONMX FU. The range of SGRs in the 2006-2011 FMP was more comprehensive.

Preferred SGRs were identified for each forest stand allocated for harvest in the FMP. The selected SGRs (forest operations prescription, FOPs) were included in each AWS for harvest and silvicultural treatments. The audit team saw evidence of refinement (during the 2001-2006 term) of the selected SGRs based on field verification of conditions and operational planning. There were no exceptions to the Silvicultural Guides noted in either the 2001-2006 or the 2006-2011 FMPs and therefore no monitoring of exceptions was required.

The IFAPP asks the audit team to assess whether the SGRs have been updated to reflect changes in practice gained from experience and forestry research. In the opinion of the audit team and based on its field observations, this has not been the case. The audit team observed that the intensity and the effectiveness of silviculture decreased during the term of the 2001-2006 FMP, and that there was no substantive change in this direction expressed in the SGRs for the 2006-2011 FMP. The audit team believes that the changes in the SGRs and in the silviculture program were made to emphasize lower cost silviculture alternatives rather than to increase the effectiveness of the silviculture program.

Forecasted silvicultural activities exceeded the treatment levels outlined in the selected management alternative in the 2001-2006 FMP. However, as discussed in the Renewal section of this audit report, the audit team believes that the implementation of silvicultural treatments was often not achieving the desired level of silvicultural intensity. For example, the lack of mechanical site preparation on some sites has compromised the stocking of the plantations on those sites.

Based on the level of harvest going into the 2006-2011 FMP, it appears that the forecasted level of silvicultural activities is appropriate.

The discussion regarding monitoring of silviculture in the text of the 2001-2006 FMP was much abbreviated. There was no real discussion of silvicultural effectiveness monitoring and only a brief mention of FTG surveys accompanying Table FMP-28. The treatment of this topic in the 2006-2011 FMP is more comprehensive and cites the requirements of the Silvicultural Effectiveness Monitoring Manual. A commitment is made to the inspection of regenerated areas three years post-establishment to determine the need for tending or other supplemental treatments.

In the 2006-2011 FMP, separate selection criteria were listed for harvest, renewal and maintenance operations and these were consistent with the areas eligible for operations. Equal weight was given to the criteria with additional thought on accessibility and harvesting older stands first. The FMP text stated the rationale for differences between selected harvest depletions and the SMA. In a few cases, areas selected for operations were younger than minimum operability age. The amounts were insignificant and rationalized in the text to meet accessibility and natural disturbance pattern emulation guideline⁹ (NDPEG) requirements.

Operational planning in the 2006-2011 FMP, including the five-year Compliance Plan that was included in the appendices, was generally thorough and accurate. The forecast shown in Table FMP-27 and its related text were the exception. The Table forecasts revenues and expenditures over the plan term. There was an over-statement of balsam fir harvest volume in the Table and this resulted in an over-estimation of revenues. Also, the forecast revenues into the Forest Renewal Trust Fund were \$2.8 million less than the planned expenses. This discrepancy was not explained in the text. The audit team notes in Section 3.8 that the Forest Renewal Trust Account end-of-year balances during the audit term were significantly above the minimum required balance and that the conifer charge was reduced accordingly. This should have been explained in the FMP.

Text regarding the estimates and assumptions used to develop Table FMP-27 was also absent. As this information is also required for plans developed according to the 2004 FMPM, the audit team makes the following Recommendation.

Recommendation 5: Great West Timber Limited must ensure that for the 2011-2021 Forest Management Plan, the revenues and expenditures forecast table is completed correctly and the related text includes all the required information.

⁹ MNR. 2002. Forest Management Guide for Natural Disturbance Pattern Emulation. Queen's Printer for Ontario. 24 pp. + Appendices.

Preparation for planning includes updating information on non-timber values that may be impacted by forest management activities. MNR is responsible for the collection and maintenance of values information and the SFL holder is required to report new values discovered during plan implementation.

The 2001 IFA recommended continued efforts to improve the quality, quantity and maintenance of values information. In preparation for the 2006-2011 FMP, funding was received and aerial surveys were conducted for stick nest and moose aquatic feeding areas for areas proposed for operations. Separate funding for updates to fisheries information was also utilized, and surveyed sites included some areas proposed for operations (e.g. Nipigon 75 fire salvage). The SFL reported new values (e.g. an osprey nest on Esker Rd.) and documentation in the plan indicated values were being reported by the public during planning.

MNR also conducted a verification of values information contained in the Natural Resource Values Information System (NRVIS) against the hard copy maps traditionally used to maintain District values information. This was done to provide assurance that all values information was accurate prior to the change to reliance on NRVIS. The audit team viewed a sample of the values information contained in NRVIS and confirmed the update of values information for the 2006-2011 FMP.

Prescriptions were developed for protection of specific non-timber values and included cold and warm water fisheries, moose aquatic feeding areas (MAFAs, Figure 6), outpost cabins and raptor nests and were appropriate to local site conditions. Alternative prescriptions were considered where appropriate. Most prescriptions followed provincial guideline requirements. Others developed for specific circumstances (e.g. protection of tourism value) utilized site specific prescriptions such as signage to control road access. One exception to guideline direction was identified in the 2006-2011 FMP which permitted tree planting within the heavy development buffer zone during the osprey nesting season. The exception was reasonable given that the nest was re-established along an active haul road.



Figure 6. MAFA at Prairie River field stop.

All AOC prescriptions contained requirements regarding roads including tertiary roads. Most prescriptions did not permit tertiary roads within an AOC.

A high priority aspect identified in the Audit Plan was ground water recharge zones. These areas have received increased attention on forests within the Thunder Bay and Nipigon Districts due to the concern with potential impacts of forestry operations, in particular road construction, on sensitive brook trout fisheries. The science is incomplete and guidelines do not exist to provide clear direction to planning teams. As a consequence, discussions are occurring and decisions are being made at the local level during forest management planning.

On the Pic River Ojibway Forest an AOC prescription was developed that placed conditions on road construction on two blocks in the 2006-2011 FMP. The initial list of blocks potentially affected was larger; however, the MNR biologist reviewed all potential blocks on the ground and narrowed the list to two on which the prescription was applied. The prescription limits ditching and possible disruption of surface water flows that could impact the quality of water reaching brook trout streams. It does not prevent harvesting of the timber.

The audit team recognizes the imperfect knowledge base associated with the prescription and considers that the efforts of MNR to ensure reasonable application of the prescription were appropriate. The audit team also believes that, given the real or potential risks to sensitive fisheries and the developing science associated with impacts of forestry on ground water, consideration of the precautionary principle is prudent. The precautionary principle recognizes that some forest management activities can cause detrimental or irreparable damage to the environment. The rationale for its application is to reduce the risk of significant effects in the absence of conclusive information. Use of best available information is encouraged. The audit team believes that the ground water recharge prescription in the FMP is consistent with the precautionary principle. The audit team also encourages the ongoing collection of information on ground water recharge zones by MNR and the refinement of the knowledge base to ensure that any impacts on forestry operations are justified.

Suggestion 3: The Ministry of Natural Resources should develop a program to determine the effectiveness of the Ground Water Recharge Zone Area of Concern prescription.

The 2006 FMP listed two new primary and two new secondary roads for construction during the plan term for a total of 15.6 km. The plan also included 27.8 km of construction on existing primary and secondary roads. Alternatives were presented where practical since some roads had no reasonable alternative locations. Factors affecting choice of the selected road corridor included terrain limitations, cost and agreements with other stakeholders.

3.3.8 Plan Review and Approval

Overall, the review and approval of the 2006-2011 FMP followed the process as outlined in the 1996 FMPM. In total there were 661 alterations of which 479 (71%) were identified as required. The remainder were split between Editorial, Comments and Suggestions. There were a total of 14 reviewers from MNR District, MNR Region and the planning team. Of these, 11 were part of the identified support team for the plan or on the planning team. Planning team members accounted for 30% of the overall comments and 29% of the required comments. This includes District reviewers who were also planning team members. MNR Region accounted for 71% of the required alterations and three of the Regional reviewers accounted for 88% of those comments. The following Table provides a summary of findings.

In general, the comments were found to be pertinent and classified correctly. The relatively large number of comments from Regional reviewers suggests that there is room for improvement on how Regional staff and the planning team communicate during plan development.

In Section 3.3.6 a number of inconsistencies and deficiencies were noted with respect to the SFMM analysis and discussion of the analysis of management alternatives and the achievement of objectives. Although one reviewer noted the issues around old growth and suggested some further investigative SFMM runs, there were no comments to prompt the planning team to address the problems. Some parts of required alterations suggest other reviewers may have also noted issues with the old growth targets but there was no coordination of the comments to fully address the issue. With respect to errors the audit team found in Table FMP-13, there were a

number of required alterations for the Table, but none addressed the issues found by the audit team. The Table that was approved in the final FMP was clearly wrong and not identified during review. This audit also identified issues with Table FMP-27. One Regional reviewer suggested that there may be an error in the table, but did not suggest that if the table was found to be correct that there needed to be far greater rationale and discussion. The result is that the issues persisted into the final approved version of the FMP. It is the audit team's finding that the review process that normally would have caught these issues failed in this case.

Table 2. Distribution of source and type of comment from the 2006-2011 FMP list of alterations.

Summary of Ministry of Natural Resources Comments Pic River Ojibway Forest 2006-2011 FMP						
Reviewer	Comment Type				Total	Percentage Breakdown
	Comment	Editorial	Required	Suggested		
Planning Team	17	46	121	12	196	30%
District Staff	0	14	14	2	30	5%
Regional Staff	7	51	334	43	435	66%
Total	24	111	469	57	661	100%
Percentage Breakdown	4%	17%	71%	9%	100%	

The plan author, who was responsible for conducting the SFMM modelling, relied heavily on MNR analysts for support and involved them in setting up the model inputs and assessment of model results. Model runs were submitted to Regional analysts throughout the development of the plan for review. Given the level of support during plan preparation it was surprising to find the issues identified in Section 3.3.6 of this audit report.

There were a number of required alteration requests that were not addressed in the final version of the plan. While some comments are minor, others like the old growth comment noted above and the errors in Table FMP-13 were more significant. The inspection of the final plan failed to identify these omissions. While it is not always necessary to address all required alterations with changes to the plan, planning teams are well advised to document the actions taken to address the comments so that it is clear that they were not just overlooked. For the 2011-2021 FMP this will be a requirement (A-73 2004 FMPM) and the plan author should ensure a system is in place to provide adequate documentation.

Recommendation 6: District and Regional Ministry of Natural Resources must conduct an assessment of the review and approval process used for the 2006-2011 Forest Management Plan and identify causes and solutions for oversights in the assessment of Management Alternatives.

Recommendation 7: Great West Timber Limited must ensure that the required alterations are addressed and that actions taken to address them are documented during the production of the 2011-2021 Forest Management Plan.

3.3.9 Plan Amendments

The master list of amendments and amendment records were found to be current and accurate in both the GWTL planning (Thunder Bay) and MNR offices. However, the records in GWTL's operational office (Manitouwadge) were inconsistent with the approved documents. This weakness in documentation is further discussed in Section 3.5.2 Documentation and Quality Control. MNR met the requirement to distribute all amendments to MNR Regional office, MNR Forest Management Branch and MNR Toronto. During the implementation of the 2001-2006 FMP there were only ten amendments requested and nine actually processed. All were administrative with the exception of one fire salvage amendment that was categorized as minor. There were very few amendments on

this Forest due to sufficient block planning at the FMP development stage and an approach for dealing with unmapped values that is consistent with the direction found in the 2004 FMPM.

3.3.10 Contingency Plans

There were no contingency plans during the period under review.

3.3.11 Annual Work Schedules

The AWSs were consistent with the 2001-2006 FMP in most respects. One notable exception is that some stands selected for harvest during the term were not on the eligibility map in the 2001-2006 FMP (i.e. the map presented at the first information centre). This appears to have been an oversight as all of these stands fit the eligibility and selection criteria in the plan and were identified on all other maps including operations maps. Also, it was noted by the audit team that all stands selected for harvest in the 2006-2011 FMP were identified on the eligibility map.

Revisions were made to the AWSs to coincide with plan amendments and followed the requirements of the 2004 FMPM in the 2005/06 AWS. Slash pile burn, aerial herbicide spray and fire protection plans were appended to AWSs as required. All phase-in requirements of the 2004 FMPM were included save the title page for the 2005/06 AWS which did not have all of the required information. The 2006/07 AWS was also checked and the title page contained all required information except the addition of access operations within the certification statement. This very small omission is noted to promote correction in future AWSs and does not warrant a Recommendation or Suggestion. FOPs were presented in the form of a stand list attributed with selected SGRs (FOP list). Therefore, FOPs corresponded fully with SGRs as defined in Table FMP-10.

There was abundant evidence of preferred SGRs having been refined in the AWS based on assessment of field conditions. When unplanned activities occurred (e.g. overflow planting), the AWS was revised and the FOP list was updated accordingly. When there is a change to a FOP during the year there is a requirement to update the AWS by appending the revised FOP to it. In such cases as the Cairngorm block, where artificial regeneration was prescribed but natural regeneration was implemented, there was no evidence of changes to the FOP list being appended to the AWS. Based on the audit team's observations and a discussion with the MNR forester, the audit team found that only those changes to prescriptions which required an AWS revision were properly documented. The actual FOP/SGR is correctly recorded in the AR. While this does not fully meet the intent of the requirement, based on the experience of the audit team, this is a fairly standard approach.

Suggestion 4: Great West Timber Limited should ensure that a certified Forest Operation Prescription is appended to the Annual Work Schedule whenever the prescription changes during the year regardless of whether an Annual Work Schedule revision is required or not.

3.4 Plan Implementation

3.4.1 Areas of Concern

The 2001-2006 FMP contained prescriptions covering 14 categories of AOCs of which nine had associated operations during the audit term. Five of the nine were checked during the field audit. The sixth was a timing restriction and the seventh value burned in the Nipigon 75 fire. AOC prescriptions were implemented as required in all cases viewed and no deviations from approved prescriptions were observed during the audit.

Monitoring of an exception to guideline direction was conducted in May of 2002. The exception was associated with an active osprey nest discovered adjacent to a large gravel pit on Esker Road. The nest burned in July 2002 during a forest fire and no further monitoring occurred until it was discovered in 2005 that a new nest was built in the same general area. Monitoring of the new nest was initiated and is ongoing under the 2006-2011 FMP.

3.4.2 Harvest

A sample of harvest activities completed during the audit term was viewed for each operator on the Forest (GWTL, and OLLs PRDC and KDSL). This included operations on various site types through all seasons. Harvesting was conducted using feller-bunchers or processors. During the term, wood was hauled to roadside as full tree, tree length and as cut-to-length. Roadside processing included chipping or delimbing/slashing or bucking. Evidence of fuel wood utilization was also apparent.

The 2001-2006 FMP was developed and implemented using direction in the marten guideline for retention of snag trees. The guideline specified the number and type of trees to be left on a harvest block following harvest. Snag requirements are now specified under NDPEG which requires more trees be left following harvest. On blocks viewed by the audit team the correct number of residuals was typically left, although compliance reports by MNR indicated that some blocks operated during the term did not meet minimum snag requirements. The audit team noted that retention of snag trees focused on leaving birch, an unmarketable species at the time (Figure 7), whereas NDPEG encourages leaving a range of tree species (and diameters) of residual trees to maximize biodiversity. The 2006-2011 FMP commits to leaving residual trees of "varying species" following harvesting operations.



Figure 7. Cutover illustrating preponderance of birch snag trees.

There were several non-compliances recorded early in the audit term consisting of trespasses, utilization issues, problem crossings, not following snag management requirements, and insufficient safety equipment. The number of non-compliances decreased significantly by the end of the term. Compliance is further discussed in the Monitoring section.

Except for the trespasses noted in compliance reports, areas harvested were approved in the FMP and AWS and were consistent with FOPs and ARs. The 2001-2006 FMP was amended and AWS revised for salvage, contingency, and moving of planned water crossing locations.

According to interviews and compliance reports, boundary layout improved during the audit term and bypass due to conservative layout also decreased. Salvage operations were appropriately completed on the Nipigon 75 fire and it was noted that very good utilization occurred.

Localized soil disturbance was noted in a few areas (see Figure 8) and there was one non-compliance related to rutting during the term. Considering the large area with fine textured soils on the Forest, site disturbance was minimized during the term.



Figure 8. An example of localized site disturbance.

Prescriptions were appropriate and effective on most sites. Partial harvest of mixedwood stands was the exception. The removal of conifer and retention of almost all deciduous trees (particularly birch) did not follow direction in the 2001-2006 FMP and is not an allowable practice according to the Silviculture Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Forest Ecosites in Ontario¹⁰ and the Crown Forest Sustainability Act. Each of these discrepancies is discussed in detail below.

As a result of the continuing issue on the Forest related to weak birch markets, there is specific direction in the 2001-2006 FMP regarding allowances for residual birch. Specifically, birch residuals in excess of those left for wildlife use, etc. are only to be allowed on the mixed conifer (ConMx) FU and the birch must be small (no dimensions are given), of lower site class (again, this is not quantified), and not compromise the silviculture treatment for the stand. According to field observations this direction was not followed for some stands during the term. For example, excess residual birch was noted on a HrdMx and SPU FU. On these sites the birch residuals are large and the site class is considered good (i.e., well-drained, deep to moderately deep, fine-textured soils). Most importantly, artificial and natural regeneration of these stands will be hampered by the large number of residual birch (see Figure 9).

The birch strategy in the 2001-2006 FMP also appropriately incorporated the following from the Silviculture Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Forest Ecosites in Ontario, "if remaining (residual) trees have the potential to interfere with the successful establishment and development of a stand, then these stems must be treated (e.g. felled, girdled, treated with herbicide). Otherwise, this stand will be considered high-graded. High-grading, a practice which does not sustain forest ecosystems, is in direct conflict with and contravention of Section 1 of the CFSA". This direction was not followed during the audit term. As a result, the audit team makes the following crucial Recommendation on this matter.

¹⁰ OMNR. 1997. Silvicultural guide to managing for black spruce, jack pine and aspen on boreal forest ecosites in Ontario. Version 1.1. Ont. Min. Nat. Resources, Queen's Printer for Ontario, Toronto. 3 books. 822pp.

Recommendation 8: The Ministry of Natural Resources must evaluate blocks partially harvested during the 2001-2006 audit period for compliance with the Forest Management Plan and the Crown Forest Sustainability Act.



Figure 9. Regeneration will be hampered by residual trees.

It should be noted that some of these blocks have been suspended for some time apparently awaiting favourable hardwood markets. Some of these blocks may still be suspended beyond the term of the 2001-2006 FMP. This is not an appropriate use of block suspensions. These blocks must be removed from suspended status to allow evaluation. Improper use of block suspensions is discussed with a Recommendation in the Monitoring section.

Direction regarding allowance for residual birch was updated in the 2006-2011 FMP. This new direction included:

- Only harvesting birch-rich FUs (BwPur and HwdMx) if birch markets develop.
- For all other FUs (although this is not clear in the FMP), birch will be left standing to contribute to NDPEG and will otherwise be considered on a case-by-case basis in accordance with the Scaling Manual¹¹ and procedures in the document Towards Resolving Utilization Issues¹².
- Confirm birch content at the AWS level and agree to strategy with MNR.

If strictly followed, this direction is appropriate. However, based on personal interviews and implementation viewed during the audit term, it is not clear that the direction is fully understood and/or will be strictly followed. Although the number of stands high-graded on the Forest appears to be quite limited, continuance of this

¹¹ OMNR. 2001. Scaling manual. Second edition, December 1, 2000. Ont. Min. Nat. Resour., Queen's Printer for Ontario.

¹² Industry/MNR Utilization Task Team. 1999. Towards Resolving Utilization Issues: A Process to Manage Unutilized Fibre. 12 pp. + Appendices.

practice is not an option on Crown Forests. As a result, the audit team makes the following crucial Recommendation and strongly urges GWTL and MNR to address this concern.

Recommendation 9: Great West Timber Limited and the Ministry of Natural Resources must ensure that the birch strategy outlined in the 2006-2011 Forest Management Plan is strictly followed.

Complete bypass of timber was also an issue during the audit term and was deemed a high priority aspect of this audit. A significant amount of bypass was noted by the audit team during the field visit (e.g. Grassy Lake and Prairie North blocks). Topography was the main cause but marketability of species (mainly birch, but also poplar and balsam poplar) was also a large factor. For this audit GWTL developed a report of the high priority aspects on the Forest including a thorough discussion of bypass and classification of bypass during the term. The bypass classification table in that report is simplified and provided herein as Table 3.

Two of the bypass types described in Table 3 are "planned" bypass. "FMP Reserve" indicates areas bypassed due to AOC prescriptions for values identified in the 2001-2006 FMP and "Reserve" describes bypass as a result of applying AOC prescriptions for new values found during plan implementation. The remaining bypass types are not "planned".

Table 3. GWTL classification of bypass during the audit term.

	Hectares 2001-06	Percentage
FMP Reserve	104	5%
Reserve	94	4%
Inoperable Terrain	819	38%
Low Yield	309	14%
Undesirable Species	128	6%
Undesirable Material	9	0%
Stagnant	26	1%
Stand Left Merchantable	646	30%
Time of Year	26	1%
Total Bypass	2,161	100%
Total Planned Harvest	7,175	

From Table 3 it is clear that the majority of the unplanned bypass on the Forest was due to inoperable terrain. Also, the 'Stand Left Merchantable' category identifies many hectares that were bypassed. This area consisted of stands that were not cut during the AWS year but were still available to cut in subsequent years. Therefore, during the 2001-2006 term, 646 ha of stands were not cut. GWTL staff indicated that many of these stands have a significant hardwood component and could be harvested when hardwood markets are favourable. These stands will be available for harvest in future terms. Low yields were also a significant reason for bypassing areas. The remaining bypass types summarized in Table 3 were not significant in size.

In total there was 2,161 ha of bypass during the audit term; 1,963 ha of this was unplanned. This is about 27% of the 2001-2006 FMP planned harvest of 7,175 ha. Considering the work done in the 2001-2006 FMP to identify inoperable areas (14% of the Forest was deemed inoperable), the amount of bypass that occurred during the audit term is unacceptable, particularly for operators. GWTL cited a lack of operational cruising data as the main reason for the large amount of bypass. GWTL is cognizant of the importance of reducing bypass. The Senior Management Team for GWTL has instructed staff to re-initiate operational/inventory cruising on the Forest and the information is to be used to support forest management planning. Nonetheless, the audit team feels that this is a significant issue that should be emphasized in this audit and makes the following Recommendation while

noting that choosing to bypass stands due to poor markets is preferable to high-grading stands through partial harvest.

Recommendation 10: Great West Timber Limited must reduce the future area of harvest bypass on the Forest.

Based on the audit sample, there were some notable differences in operations between operators during the term. For example, block suspensions and partial harvest were more prevalent for the OLLs versus the GWTL operators. Also, the OLLs had a slightly higher proportion of compliance issues (compliance is discussed in section 3.6.1). Some of these differences were due to natural variance between traditional operating areas. On the other hand, based on a very small sample, GWTL operators appear to be less effective than OLL operators in difficult terrain. This was most apparent at the Grassy Lake block where only the flat section of the block was harvested. This will not be alleviated by operational cruising. As a result the audit team makes the following Suggestion.

Suggestion 5: Great West Timber Limited should review operator performance to minimize bypass and, where required, provide appropriate guidance and training to improve performance.

Although stray wood was noted as an issue on a majority of harvest compliance inspections completed during the term, the in-bush utilization viewed was generally good. Stump heights were appropriate and no lodged trees were noted; however, stray wood was noted by the audit team in some blocks (particularly mixed wood stands). This was limited and does not appear to be a continuing issue. As noted, in-bush utilization was particularly well done in the Nipigon 75 fire salvage area.

On the other hand, roadside utilization was not particularly good and was not always in accordance with the Scaling Manual. At almost every site audited there was merchantable timber left at roadside (including conifer saw logs). This timber was often scaled, but is now starting to deteriorate. Merchantable timber was also frequently mixed with slash.

Some of the blocks audited were suspended and the merchantable timber remaining could be recovered during the return operations. However, deterioration of wood and the cost of picking through slash piles will likely preclude this from happening. Considering the cost to move timber to roadside and the requirements of the Scaling Manual, operators should be more diligent in collecting and hauling all merchantable material. Recommendations 21 and 22 also address this issue.

Recommendation 11: Great West Timber Limited and the Overlapping Licensees must ensure that marketable timber is removed and utilized from all roadsides in the future.

Accumulation of roadside debris has been a concern on this Forest for a number of years. The 2001-2006 FMP noted this as an issue and the 2001 IFA made a Recommendation that GWTL make a more determined effort to resolve slash management. According to annual reports some efforts to pile and burn slash were made during the audit term, mainly in 2003. However the audit team noted that slash was not piled at most sites viewed and the observed results of the burning were not effective. Seeing that little material change was witnessed in the field, the audit team believes that slash management remains an important issue on the Forest (see Figure 10). Slash was rarely piled during the audit term and the observed results of the burning were not effective. The 2006-2011 FMP has a comprehensive slash management plan that will, if implemented, reduce the negative effects of slash on the Forest. As a result, the following crucial Recommendation is made.

Recommendation 12: Great West Timber Limited and the Overlapping Licensees must follow the slash management program outlined in the 2006-2011 FMP, including the treatment of older slash.



Figure 10. An example of excessive slash containing merchantable fibre, left at roadside.

3.4.3 Renewal

Except as previously noted concerning the updating of in-year FOP changes, the silvicultural program was appropriately documented from the FMP through the AWS/FOP to records of actual treatments and ARs. This included revisions for unplanned activities and in one case an amendment to Table FMP-10 to allow for a prescribed treatment which was not previously identified in the SGRs.

During the audit term the amount of tree planting exceeded the planned area and number targets. However, no seeding was done (300 ha were planned) and natural regeneration has yet to be reported (target was 3300 ha).

A statistical gap exists between the levels of harvest and renewal (based on the trends analysis report) for the 1996-2001 and the 2001-2006 FMP terms. Overall harvest and salvage for this period was 14,745 ha (based on AR values plus projections for final year of 2001-2006 term) while renewal was 8,335 ha. The audit team is confident that there isn't a significant backlog of un-regenerated land on the Forest (as the statistics would suggest), but that this apparent gap is primarily due to the lack of reporting of natural regeneration. No natural regeneration was reported in the first four years of the audit term.

Recommendation 13: Great West Timber Limited must report natural regeneration in its Annual Reports, in accordance with the requirements of the Forest Management Planning Manual.

There was a significant reduction in actual mechanical site preparation in comparison with the forecast for the 2001-2006 FMP. The audit team inspected some sites where the survival of planted seedlings was clearly compromised by the lack of mechanical site preparation. This was especially apparent at the Cairngorm and Km 43 Amendment blocks. Survival of planted seedlings would also have been improved at the Grassy Lake block, however the audit team feels that this would have been a difficult site to treat with mechanical site preparation because of the combination of upland and lowland conditions. The use of direct planting, at least on some of the deep duff sites observed, was not money well spent. At the same time, reported planting densities on these direct planted sites (as described in the field audit information packages) were inconsistent with what, in the audit team's opinion, could reasonably have been well planted on those sites. Resulting patchy regeneration may

meet the minimum regeneration standards for the SGR applied, however on a wider scale these areas cannot truly be considered to be growing on an intensive yield curve or to be achieving the desired future forest condition as described in the selected management alternative.

The audit team observed some successful examples of direct planting or planting with chemical site preparation. These treatments, as in the Vein Lake area (Figure 11), were characterized by relatively clean cutovers with shallow duff layers. The audit team is concerned that on many other sites the planting effort will not result in a new stand that develops on an intensive yield curve as per the intention of the prescription, and the requirements of the selected management alternative. Even if minimum regeneration standards are met, many of the sites observed will not realize their full potential. In the opinion of the audit team, there should be greater expenditure on mechanical site preparation on many sites with the goal of improving plantation survival, stocking and the density control which is critical to achieving the stated goal of maximizing sawlog production.

Suggestion 6: Great West Timber Limited should re-evaluate its use of direct planting on sites with deep duff layers or with excessive logging slash in order to ensure the effectiveness of these treatments.



Figure 11. Successful direct planting treatment.

Similarly, on many of the field sites audited, the use of natural regeneration in low quality, over-mature hardwood stands will only result in degraded forest stands. Often these sites would be productive spruce stands if artificially treated (Figure 12). The application of natural regeneration in some cases appears to be an unplanned or a default action rather than being based on a high probability of a successful outcome of the treatment. The audit team believes that in at least 50% of the natural regeneration areas which were observed, artificial

regeneration through mechanical site preparation and planting would have been more effective and appropriate for site conditions. In the opinion of the audit team, the use of natural regeneration on the following sites was in whole or in part questionable: Cairngorm (south), selected areas of Vein Lake, Ruffles, Prairie Lake S., and Deadhorse Km 27.



Figure 12. Natural renewal on a site at Prairie Lake S. that would have produced a good spruce stand if the site had been properly prepared and planted.

The success of older Crown and company forest renewal activities were clearly evident during the on-the-ground travel and especially in the forest-wide helicopter inspection (Figure 13) conducted by the audit team. Generally, the audit team feels that the current efforts will not be as successful as many of the older treatments and do not reflect the potential of the Forest in general. The focus on lower cost silvicultural treatments evident on the Forest is at least in part inappropriate for the sites encountered, and therefore does not represent good practice in the opinion of the audit team.

Sites such as the south end of Deadhorse Km 27 will not likely meet minimum silvicultural standards, while others like Prairie Lake S. will probably achieve minimum regeneration standards but are reflective of an acceptance of mediocrity and lost opportunities. In the case of the Cairngorm block (north) the results are simply inferior to what could have been achieved with a little more investment in mechanical site preparation.

The audit team compared the level of planned intensive silviculture treatments (mechanical site preparation with planting) to implementation on blocks or portions of blocks logged between 2001/02 and 2003/04. The comparison was intended to determine if the silviculture work being implemented was consistent with that which was proposed and, therefore, supportive of the projected future forest condition as determined through modeling. Of the total area prescribed for intensive silviculture (2,247 ha) 532 ha of planting was not completed (24%) by 2004, the majority of which (415 ha) was associated with area harvested in 2001/02. Planned mechanical site preparation on 850 ha was not implemented or planting occurred without it. This analysis strongly suggests that there is a disconnect between the forecast future forest condition and the amount of intensive silviculture being implemented to achieve it.

The team thus makes a crucial Recommendation that must be addressed to ensure that the current silvicultural operations track to the forecast future conditions.

Recommendation 14: Great West Timber Limited must ensure that its silvicultural treatments are effective in achieving the desired future forest condition as defined by not only minimum regeneration standards, but also in terms of prescribed management intensity and associated yields.



Figure 13. Older treatment area illustrating the excellent results of intensive silviculture.

3.4.4 Tending and Protection

The company had an effective tending program which was primarily characterized by aerial chemical release of plantation areas. Eighty-nine percent of the forecast area was completed and field inspection revealed consistently good results. The audit team finds GWTL is applying an appropriate level of tending effort to ensure plantation survival and development.

There were no insect or disease control or protection programs conducted during the audit term.

3.4.5 Renewal Support

GWTL does not participate in any tree improvement activities on this Forest and there are no tree improvement properties on the Forest. Seed collection and stock production were sufficient to meet the needs of the Forest renewal program. As previously discussed, based on field observation, it appears that planting densities on many sites could be reduced.

3.4.6 Access

The audit team viewed recent road construction on Esker Lake, Beeline Lake, Ruffle Lake and Vein Lake roads. All roads were constructed as described in the FMP and general road construction was consistent with accepted

practices. Signage as specified in the FMP was installed (Figure 14). Tertiary roads were also adequately constructed with no significant environmental issues noted.



Figure 14. Access control sign on Esker Road.

All water crossings viewed were located as per the FMP and were the correct structure and size as described in the AWS. Issues with a few culverts were noted by the audit team (e.g. perched, minor erosion, limited stabilizing material, significantly dented culvert as in Figure 15).

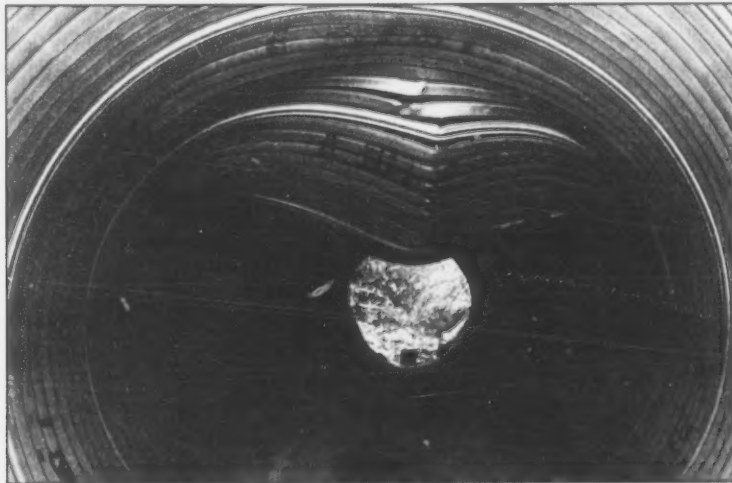


Figure 15. Partially collapsed culvert at Ruffles Block.

In addition, remedial work was conducted on some culvert installations to correct installation deficiencies noted by MNR. In general this suggests that initial water crossing installations require improvement. An opportunity noted by the audit team was the use of alternate structures (e.g. portable bridges, arched culverts) where embedding of a round pipe is impractical. Water crossing removals were effective and re-vegetation was observed.

Suggestion 7: Great West Timber Limited and Overlapping Licensees should consider installing alternative water crossing structures where substrate conditions do not permit a round pipe.

Examples of excellent bridge installations were viewed on Pistol Lake Road (GWTL) and Esker Lake Road (PRDC). As part of the agreement with Ontario Parks to allow crossing of the Steel River by the Esker Road, PRDC committed to maintaining a portage trail around the bridge. The audit team observed that the work was up-to-date (Figure 16).



Figure 16. Portage sign and cleared trail at the Steel River Bridge.

GWTL installed two large culverts on Beeline Road and had utilized organic material on the approaches in conjunction with cobble stones to act as a base for rapid establishment of vegetation and to assist in stabilizing the banks. This technique was observed to be effective (Figure 17).



Figure 17. GWTL culvert installation with good bank stabilization.

Some issues with aggregate pit establishment and maintenance were observed. Two GWTL Category 9 aggregate pits were observed with inadequate setbacks which have resulted in undermining of the pit face and trees falling into the pit (Figure 18). One KDSL Category 9 pit was being used to store inoperable equipment and one Category 14 pit (Vein L.) had inadequate rehabilitation (i.e., not sloped).



Figure 18. Category 9 pit with inadequate setback and unstable face.

Recommendation 15: Great West Timber Limited and the Overlapping Licensees must meet the requirements for setbacks and rehabilitation of aggregate pits.

Under the Provincial roads maintenance agreement with the forest industry, MNR recently provided funding for a list of eligible maintenance activities on primary forest access roads. The agreement acknowledges the fact that other forest users benefit from the presence of roads constructed and maintained by the forest industry, and therefore the Province should bear some of the costs.

The IFAPP requires that the audit team examine work invoiced by GWTL under the agreement to confirm that the work was eligible and completed as described. The audit team reviewed invoices and records totalling approximately \$270,000 provided by GWTL to MNR for gravelling, belly dumping and grading of primary roads such as the Deadhorse Road. Based on field observations during the audit, the audit team could make reasonable conclusions that some of the work was done. However, the audit team is concerned that certain activities are not practical to audit under the IFAPP (i.e. grading, snow ploughing, sanding) given lengthy delays between the execution of the work and the conducting of the audit.

Most of the invoiced work was performed by a third party, not GWTL. Records provided for the work completed by GWTL were very detailed; however, the records provided for the third party work were very general. The audit team also noted some deficiencies in other aspects of documentation and reporting (i.e. program not referenced in the AWS; no maps detailing location and specifics of work invoiced). In addition, MNR's Districts play no role in the verification of work completed despite their responsibility to approve payment of invoices. Given the issues noted above the audit team makes the following Recommendation and Suggestions.

Recommendation 16: The Ministry of Natural Resources must review the effectiveness of conducting an independent review of the Road Maintenance Agreement through the Independent Forest Audit process.

Suggestion 8: The Ministry of Natural Resources should consider a role for Districts in the field verification of work performed under the Road Maintenance Agreement.

Suggestion 9: The Ministry of Natural Resources should review the adequacy of requirements for supporting evidence, including third party records of work completed, for invoices submitted under the Roads Maintenance Agreement.

3.5 System Support

3.5.1 Human Resources

A review of MNR, GWTL, and operational contractor records indicated sufficient staff and employee training to effectively manage the Forest. The audit team observed numerous examples of the training and communication efforts of GWTL and MNR. Compliance issues were reviewed on a regular basis with MNR, GWTL, OLLs and contractors, and posted on a bulletin board in the GWTL operational office. Refresher courses and supplementary training were offered in the instances of a water crossing found to be in non-compliance and on measures to take to reduce the likelihood of insect outbreaks when tip moth was discovered on a recently planted site. GWTL's Environmental Management System is a good mechanism for ensuring safety, compliance with legislation, and training for portions of the operation.

While staffing levels were generally sufficient to complete required tasks, a Recommendation is made in Section 3.6.1 General Monitoring - Compliance to ensure MNR fulfill its compliance responsibility. Staff at MNR informed the audit team that, in their view, the lack of a dedicated compliance technician for the Forest and the demands of other duties of the remaining staff led to minimal compliance inspections completed in the last few years. A reduced level of harvest and road building activity also contributed to the reduced number of compliance inspections. An increased MNR monitoring effort may be necessary if GWTL continues with its plan to involve OLLs in the compliance inspection program.

3.5.2 Documentation and Quality Control

During the audit, non-conformances with respect to availability of current and original documents were noted in the GWTL Manitouwadge office. Occasionally, paper copies did not match the electronic version of documents provided to the audit team and it was clear that the most current, approved version of documents (such as FMP amendments, 2004/05 approved AR, 2003/04 and 2005/06 AWS revisions, 2006-2011 FMP Appendix 19) were not on file. GWTL maintains central filing of original documents in the planning office in Thunder Bay. However, poor records in the operations office leave GWTL, OLLs, contractors, the public, and auditors at risk of referencing obsolete or incomplete documents.

Recommendation 17: Great West Timber Limited must implement a system to ensure that all planning and operational documents related to the Forest are kept up-to-date, properly identified and located, and protected against unintended use if obsolete.

The MNR documents were generally found to be thorough and in good order. Digital data is maintained and archived appropriately.

3.6 Monitoring

3.6.1 General Monitoring

Silviculture

As previously identified, there was little discussion regarding silvicultural effectiveness monitoring in the 2001-2006 FMP. Despite this, the audit team found that the actual field program of silvicultural monitoring of artificially regenerated sites was quite comprehensive. The monitoring program included post-cut surveys, planting quality assessments, permanent sample plots for survival assessment, spray assessments, and culminated with FTG surveys.

At the end of the audit term, no FTG survey information was reported for the 2001-2006 period. An aerial survey program of 4,772 ha was completed in 2003. Its outcomes were later retracted when it was shown, based on field verification, that there were significant problems with the survey results. The plan author and MNR had very little confidence in the data and therefore removed it from the planning inventory used for the 2006-2011 FMP.

The results of a large-scale photography (LSP) based survey, conducted in 2005, were inspected by the audit team both in the field and in the office. There was general concurrence between the observations and preliminary, but unreported, results of this survey method. The 2005 survey utilized two methods of LSP to gather data as well as implementing a number of ground verification plots. The audit team finds that GWTL made a step forward in this area. The 4,674 ha of FTG results from the 2005 survey will be reported in the 2005/06 AR for the Forest.

The previous IFA identified a significant backlog of land in need of FTG surveys. The 2001-2006 FMP identified a planned FTG program of 33,500 ha; the 2006-2011 FMP identified a program of 37,549 ha. After the field site visit and its closing meeting, additional information was supplied to the audit team. This resulted in discussions with the new GWTL Area Manager. The audit team, with the assistance of the Area Manager, investigated the current planning inventory for the Forest and were unable to verify this backlog or explain from where this large number had originated.

The best assessment that the audit team can make is that there are 41,367 ha of managed Crown land which were depleted and have no FRI parameters from either FTG surveys or FRI renewal. Of this total, 19,722 ha are ten years of age or greater, however the bulk of this (12,356 ha) is exactly ten years old and is the result of a forest fire. GWTL believes that it is too early to assess most of this ten-year-old fire depleted area. Accounting for work done in 2005 and an amount of barren and scattered standing timber, the potential pool of area to currently survey is approximately 5,000 ha. There is a large amount of natural depletion areas (and regular harvest) which will be quickly coming on-line during the 2006-2011 FMP term.

While there is a large area of land which is imminently available for survey, the team believes that there is no significant accumulation of older un-surveyed land which could be characterized as a significant backlog. The current annual rate of assessment (approximately 5,000 ha per year, as in 2005 and 2006) should be sufficient to ensure the currency of the inventory, if maintained.

GWTL does not appear to have done a thorough review of its inventory to establish FTG survey targets in either the 2001-2006 or the 2006-2011 FMPs. It appears that Table FMP-28, which forecasts the assessment of regeneration success, is in error. This component of the planning inventory is unclear to the audit team and should be examined thoroughly. Therefore, the audit team makes the following crucial Recommendation.

Recommendation 18: Great West Timber Limited must examine its planning inventory to ensure that all of the areas eligible for Free-To-Grow survey were identified and must document these findings by amending Table FMP-28. Based on the results of this investigation, Great West Timber Limited must ensure that the current pace of Free-To-Grow surveys is continued so that the program is up-to-date.

The shortfall of FTG surveys notwithstanding, the audit team finds that silvicultural effectiveness monitoring of artificial regeneration areas is satisfactory. Since monitoring tends to follow plots established in plantation areas, the monitoring of areas left for natural regeneration may be weak and problems may only be picked up at the time of FTG assessment. In the opinion of the audit team the use of natural regeneration, reporting of accomplishments, and the follow-up monitoring of these areas needs improvement. Natural regeneration is an inexpensive, effective treatment which follows the SGRs for the FMP, however its application must still result in minimum silvicultural standards being met as a result, the audit team makes the following Suggestion.

Suggestion 10: Great West Timber Limited should include monitoring the success of natural regeneration areas as part of its program of silvicultural effectiveness monitoring.

Forest Operations Compliance Information System (FOCIS) and Forest Operations Information Program (FOIP) reports for the silviculture program were audited and were in good order. There were no instances of non-compliance noted.

Compliance

MNR and GWTL had compliance plans in effect during the audit term and completed compliance inspections in each of the operating years during the term. The compliance programs are discussed separately below.

Nipigon District MNR produced a five-year compliance plan for 1998-2003 that set priorities for MNR inspections. The 1998 District compliance plan was not updated in 2003. Apparently, this was due to interim direction from MNR's Enforcement Branch that Districts were not required to update their five-year compliance plan. To partially fulfill the strategic MNR compliance planning gap, the Enforcement Branch revised compliance planning direction substantially to provide for the development of Regional compliance strategies that incorporate current compliance and regulatory direction from a variety of sources. As such, Northwest Region MNR produced a Regional compliance strategy in 2005 that Districts were legally obligated to comply with.

One suggestion in the Regional compliance strategy was that MNR complete a timely review of aerial photographs to discover unauthorized harvest. Although this was common practice early in the audit term, the practice was not continued. The audit team believes that this is a cost-effective way of determining compliance related to cut boundaries, etc. and makes the following Suggestion.

Suggestion 11: The Ministry of Natural Resources should review supplementary aerial photography annually for compliance purposes.

District MNR also produced an ACOP for each year during the audit term. Direction regarding MNR compliance inspection frequency was clarified in each ACOP. For example, the preferred rate of MNR inspections on the Forest from 2003 to 2006 was one per month. In 2004/05 and 2005/06 the number of MNR compliance inspections completed fell below the rate set in the ACOPs to five and seven, respectively. Although year-to-year operations can cause variations in compliance reporting needs, the recurring issues and less-than-stellar compliance record on the Forest suggest that the level of MNR inspections completed in the final two years of the audit term was not sufficient.

Recommendation 19: The Ministry of Natural Resources must complete the appropriate number of compliance inspections to match the level of risk and compliance issues on the Forest.

GWTL also produced a five-year compliance plan that was included as an appendix to the 2001-2006 FMP and an annual compliance schedule for each AWS. A new five-year plan was included in the 2006-2011 FMP as required.

The five-year Compliance Plan that accompanied the 2001-2006 FMP directed that the OLLs assume responsibility for compliance monitoring and reporting, and fulfill the same duties as GWTL foremen. Despite this, there were a number of issues related to compliance during the term as discussed below. OLLs became fully responsible for completing compliance inspections on their operations for the start of the 2006-2011 FMP, as directed by the new five-year Compliance Plan.

The level of GWTL compliance monitoring completed on the Forest during the audit term was appropriate for the operations that occurred. In addition, implementation of the new five-year compliance plan in the 2006-2011 FMP should aid in improving compliance on the Forest. However, based on the fact that there were recurring compliance issues on the Forest during the audit term (e.g. crossings, utilization, and snags), it appears that there is some tolerance from inspectors that operators not deal with these ongoing issues.

Recommendation 20: Great West Timber Limited, the Overlapping Licensees and the Ministry of Natural Resources must ensure that the recurrence of similar operational compliance issues is reduced significantly in number on the Forest.

Most compliance reports completed by MNR and GWTL during the audit term were submitted within the stipulated timelines. Table 4 summarizes the number of inspections and non-compliances reported by MNR and GWTL during the audit term. Note that the percentage of non-compliance found by MNR is much higher than that of GWTL. This is mainly due to the fact that, while completing fewer reports than GWTL, MNR completed reports for all non-compliances already reported by GWTL, as required. However, in 2002/03 MNR reported significantly more non-compliances than GWTL (11 versus five). The reason for this discrepancy is not discussed in the AR. Deficiencies in annual reporting are discussed in Section 6.2.

Overall, the number of non-compliances declined during the audit term. This appears to be a result of completing a majority of operations and inspections early in the term. When non-compliance occurred, remedial actions were appropriate, e.g. areas of trespass were to be re-planted and poor crossings fixed.

In 2004 the electronic FOIP reporting system was initiated. This streamlined the reporting process so that for each operation reported on, a single report was followed by MNR and GWTL. This eliminated dual reporting of non-compliances.

Table 4. Summary of inspections and non-compliances reported during the audit term.

Year	Reports	MNR Non- Compliances	Percent	Reports	GWTL Non- Compliances	Percent
2001-02	20	8	40%	73	9	12%
2002-03	20	11	55%	65	5	8%
2003-04	13	7	54%	50	5	10%
2004-05*	5	0	0%	10	1	10%
2005-06*	7	2	29%	24	2	8%
Total	65	28	43%	222	22	10%

As discussed in the Harvesting section, GWTL suspended many blocks for lengthy periods during the audit term. In some cases this appears to have been a result of waiting for fickle hardwood markets to develop. Suspended

blocks were not sub-divided during the term to allow partial 'completion of harvesting operations' inspections and to facilitate execution of silviculture activities. As a result, it was noted that silviculture operations sometimes occurred during suspension, which is not an acceptable practice. Furthermore, many blocks are still considered suspended even though the 2001-2006 FMP has expired and these blocks were not identified for operations in the 2006-2011 FMP. Table 5, received from GWTL during the site visit, below summarizes blocks that were still suspended at the end of the audit term (i.e., beyond the 2001-2006 FMP expiry).

Table 5. Summary of block suspensions during audit term.

Licensee	Block	Harvest Started	Date of Suspension
PRDC	Prairie Lake North	2001/02	2001/02, 2002/03, 2003/04, and 2005/06
	Esler Lake Salvage	2001/02	2003/04
	Km 43 Po Amendment	2003/04	2003/04
	Cairngorm	2003/04	2003/04
Ken Dooley & Sons	Prairie River Block	2001/02	2001/02, 2002/03, 2003/04, and 2005/06
	Deadhorse Km 27	2002/03	2003/04
	Prairie Lake South	2001/02	2002/02 & 2003/04
	Glory Lake	2001/02	2002/03
Great West Timber Ltd	Vein Lake	2002/02	2002/03 & 2005/06
	Grassy Lake	2001/02	2001/02
	Route Lake Strips	2001/02	2001/02
	Ruffle Lake Pj Km 21 Pit	2001/02	2001/02

The policies and procedures documents related to forest industry compliance planning are clear as to the proper use of block suspensions. As demonstrated, block suspensions were not completed in accordance with the requirements during the audit term and the audit team makes the following Recommendations and Suggestion.

Recommendation 21: Great West Timber Limited, Overlapping Licensees and the Ministry of Natural Resources must conduct mutual site visits to promptly resolve any concerns in harvest blocks with outstanding suspended status reports, conduct final inspections and complete inspection reports, to bring closure to these harvest areas.

Recommendation 22: Great West Timber Limited and Overlapping Licensees must complete harvest, haul and clean-up operations prior to starting silviculture operations.

Suggestion 12: The Ministry of Natural Resources and Great West Timber Limited should consider partial block completions to allow for timely silviculture treatments.

3.6.2 Annual Reports

The audit team reviewed ARs covering four years of the audit term (2001/02 to 2004/05). The AR for 2005/06 was not required to be submitted until November 2006. Records of submission dates were available for the 2001/02 AR, but not the remainder. The reports generally met requirements with the following deficiencies noted:

- Compliance summary table not always completed (i.e., Table AR-12)
- Text regarding compliance not included in first two ARs
- Follow through and reporting of GWTL commitments in compliance plan regarding road and water crossing inspections was inadequate

- A summary of the results of the 2001 IFA for the management unit was not provided
- No discussion of exceptions monitoring for operations near an osprey nest in the first AR.

Recommendation 23: The Ministry of Natural Resources and Great West Timber Limited must ensure that the Annual Reports include all the required information and discussion and that accurate records of submission dates are recorded.

3.6.3 Report of Past Forest Operations

The RPFO reviewed covered the period from April 1, 1996 to March 31, 2001. The Plan for that term was prepared according to the Timber Management Planning Manual.

Actual harvest area in the 1996-2001 term was less than forecast (61%) and volume achievement was even less (42% of forecast). The main reason for under-achievement of area cut was bypass of stands due to low yield and difficult terrain. A total of 2,105 ha were bypassed in the term. The low yields were mainly a result of dieback of balsam fir and spruce following the latest spruce budworm event. Stated reasons for this under-achievement were reasonable. For the 2006-2011 FMP considerable effort was made to reduce the landbase by areas that were not deemed operable at the time.

There were no wood supply targets when the 1996-2001 FMP was written. However, following the issuance of the SFL in 1998, Dubreuil Wood Products was to receive 20,000 m³ of conifer saw logs per year. Monitoring of this commitment was not completed and this information was not available in the RPFO. Reporting of achievement of wood supply commitments is now required and is common practice.

Actual renewal levels were 28% of planned for the term. This was because of the lower than planned levels of harvest and the fact that almost one-third of the harvest occurred in the last year of the plan. Some of the hardwood FUs were not harvested, especially birch, which means levels of natural regeneration were much lower than anticipated.

While the audit team was informed that the RPFO was considered as required in the development of the subsequent Plan, the team found that the conclusions in the RPFO were weak and would have been of little use in plan development. Modelling for the 1996-2001 FMP was completed using MADCALC and therefore the discussion around assumptions was very limited compared to current assumptions and expectations associated with SFMM. An RPFO requirement not completed was a listing and discussion of amendments to the 1996-2001 Timber Management Plan. There were 27 amendments including one major amendment as a result of a fire.

With respect to silviculture, the RPFO was insufficient in its discussion of silvicultural effectiveness and did not provide any direction for future silvicultural planning. There was no Table RPFO-9. There were no conclusions or recommendations drawn regarding silvicultural effectiveness, even though this might have been possible based on Table RPFO-8.

There was no discussion regarding the appropriateness of silvicultural funding provided in the RPFO. Based on observations regarding declining silvicultural intensities and the obvious efforts to reduce silvicultural costs, this discussion would have been extremely valuable.

While the RPFO listed the management objectives for the FMP under review, the author failed to provide any assessment of the achievement of those objectives. This is required by the FMPM and is an important step in evaluating their usefulness in subsequent FMPs. It also allows the documentation of any success or failures in implementing the objectives. The results of the 2001 IFA for the Forest were also not presented in the RPFO or RPFO summary as required.

The FMPM includes a suite of measurable indicators of forest sustainability that must be monitored to provide for the assessment of forest sustainability. Utilizing the best available information, RPFO Tables RPFO-13 through RPFO-19 provided a description of changes in forest condition and report on forest sustainability. Reporting is accomplished through the RPFO utilizing Tables RPFO-13 through RPFO-19 and the best available information to provide a description of changes in forest condition. The 1996-2001 RPFO for the Forest included data in Tables RPFO-13 (forest condition), RPFO-14 (area available for timber production), RPFO-18 (selected measurable indicators), and RPFO-19 (frequency of clearcut and wildfire sizes). The RPFO author correctly stated that not all tables could be completed due to a lack of pertinent information in the 1996-2001 FMP. Planning requirements at the time did not address indicators of sustainability. Reporting on the full suite of indicators will occur in the Year Ten AR for the Forest which is due in November 2006.

3.7 Achievement of Management Objectives and Forest Sustainability

3.7.1 Achievement of Management Objectives

Management objectives are developed in every FMP and at the local forest level are vitally important as they set the outcomes of activities. Assessing the success and progress in meeting them is critical in this and every audit. On the other hand, forest management has a very long time horizon so adaptive management can and must take place. Making adjustments and allowing reasoned changes is crucial to targets and strategies and altering approaches over time that fit with evidence and experience.

The 1996-2001 RPFO for the Forest required an assessment of the achievement of management objectives. While the audit team did not comprehensively review the 1996-2001 FMP because it was outside the scope of the audit, the text identified five major objectives and four sub categories. These were:

1. HARVEST
 - Long-term wood supply
 - Short-term wood supply
 - Utilization
 - Economic Development
2. RENEWAL
3. INTEGRATED RESOURCE MANAGEMENT
4. ENVIRONMENTAL QUALITY
5. FOREST PROTECTION

Contrary to the requirements, there were no comments or assessments within the RPFO with regard to objective achievement. The audit team is therefore unable to provide an analysis of the author's assessment of the achievement of management objectives. No field sites were viewed to confirm whether or not objectives were met because these years were outside of the audit period and were to be assessed as part of the 1996-2001 IFA.

The audit team examined the following documents to assess the degree of achievement of the 2001-2006 FMP's approved management objectives:

- The 2001-2006 FMP
- The Comparison and Trend Analysis of Planned versus Actual Forest Operations
- Annual Reports for the first four years of the audit term

After reviewing these documents, the audit team conducted interviews to further evaluate the level of achievement and the rationale for significant variances between planned and actual results. Additionally, the on-the-ground site stops and the aerial inspections provided observable evidence of the degree of success in reaching the objectives. The audit team's findings are shown in Table 6.

Table 6. The audit team's assessment of the achievement of the 2001-2006 Pic River Ojibway Forest Management Plan's objectives.

Audit Team Assessment of Degree of Achievement – 2001-2006 Pic River Ojibway Forest FMP Objectives		
Objective	Audit Team Assessment of Progress Toward Achievement (Met/Not Met/Partially Met)	Comment, Recommendation, or Suggestion
A. Provision of Forest Diversity		
A1. Move toward the prior forest condition	Met	
B. Provision of Forest Cover		
B1. Marten	Met	
B2. Moose	Met	
B3. Eagles, ospreys and great blue herons	Met	
B4. Cold water fisheries	Met	
B5. Vista from highway 17	Met	
B6. Outdoor recreation opportunities	Met	
C. Provision for Social and Economic Matters		
C1. Stable work force	Met	
C2. Native Communities	Met	
C3. Wood flow	Met	
C4. Conifer sawlogs	Partially Met	About 185,000 m ³ of sawlogs were delivered prior to April 1, 2005. This was less than half of the target volume. Suggestion 5
D. Silviculture		
D1. Maximize value of silviculture investment	Partially Met	Costs minimized and have occasionally led to ineffective silviculture. Recommendation 14
D2. Maintain enhanced sawlog production	Partially Met	Some planting in areas not appropriately spaced. Recommendation 14 Suggestion 6
D3. Improve the inventory records	Partially Met	The insufficiency of up-to-date FTG information. Recommendation 13 & 18 Suggestion 10

The first two sets of objectives labelled 'A' and 'B' in the FMP were met in the opinion of the audit team. Three of the four objectives were met in the third set (C) which set objectives for the Provision for Social and Economic Matters. The exception was the supply of conifer sawlogs from the Forest. While only four years of information were available, the supply target was under-achieved by a wide margin. All three of the Silviculture objectives (D) were partially met.

With respect to maximizing the value of silvicultural investments, while there were efforts to minimize costs, many of the results were not as good as expected. The lack of mechanical site preparation on some sites appeared to be inappropriate and compromised the value of trees planted on the site as expressed by survival and stocking.

Objective D2, maintaining enhanced sawlog production, was partially met through the artificial regeneration of conifer on former conifer FUs. However, density control is a key aspect of enhancing sawlog production, or of any intensive silvicultural regime for that matter, and is strongly compromised when planting in non-site prepared ground.

As mentioned in Section 3.6.1 General Monitoring - Silviculture, GWTL must make a thorough assessment of their inventory to ensure that all areas which are eligible for FTG surveys are identified. Based on work completed by the planning team and management forester, it does not appear that there is a significant backlog of area to be surveyed.

As per discussions regarding the application of silvicultural treatments, the audit team is concerned with the reduction of silvicultural intensity which was evident on the Forest. While most areas will, in the opinion of the audit team, meet minimum regeneration standards, many areas are not being managed to their potential.

3.7.2 Review of RPFO Assessment of Sustainability

The RPFO is developed after an FMP has run its course. The audit team examined the 1996-2001 RPFO from the perspective of how it addressed the issue of sustainability.

One measure of sustainable forest management is the effort in regenerating the forest to the planned condition and vigour. The RPFO (Table RPFO-7) compared how much area was site prepared and regenerated versus the plan and found there was a shortfall. This is only partially explained by the fact that 48% of the planned harvest occurred (Table RPFO-1). Regeneration was accomplished on 28% of the planned area. While the ratio of artificial regeneration to natural exceeds the planned ratio, tree planting was still only 34% of planned and none of the direct seeding was conducted. Mechanical site preparation constituted the majority of all site preparation activities, but was conducted on 28% of the planned area. This is significantly less than the harvest achievement. The RPFO author did not acknowledge the impact to sustainability, but stated that subsequent regeneration efforts would need to be improved. The author stated that part of the shortfall was due to the fact that 2,563 ha were harvested in the final year of the FMP and the areas could not be regenerated in the same year. A review of the 2001-2006 data shows that GWTL met their target for tree planting during that term.

Of the most significant conifer FUs (Spup, Conmx and Pjpur), mechanical site preparation was prescribed for the preferred SGR in the 2001-2006 FMP. Table FMP-25 targeted 724 ha per year of mechanical site preparation. However, only 330 ha per year were reported in the ARs. This represents 46% achievement, much less than the 66% harvest achievement. According to the SGRs, a lack of mechanical site preparation eliminates the Conmx, Spup and Pjpur conifer FUs from the projected intensive yield curves.

As mentioned in Section 3.6.1, reporting on the full suite of measurable indicators of sustainability will not occur until the Year Ten AR is submitted. The 1996-2001 RPFO provided information on a number of indicators. The audit team noted that totals reported in Table RPFO-13 (area available for timber production) were incorrect by a large margin. Examination of the raw table values, including a manual summary of the totals, indicated that the landbase for timber production declined by approximately 5%. This is consistent with removal of the Gravel River portion of the former Steel River Crown Management Unit which is now the Pic River Ojibway Forest. No large changes in age class within FUs were evident.

Table RPFO-13 did not provide detailed projections of desired future forest condition, although Table RPFO-14 projected a total of 178,883 ha of area available for timber production at year 2016.

Table RPFO-18 provided information on several indicators. The audit team noted a difference between the total productive forest area for 2001 in the RPFO compared to the 2001-2006 FMP figures (208,781 ha vs. 182,245 ha). The audit team believes that the RPFO used an incorrect number since no additions occurred to the landbase from the previous term.

The percentage of available harvest area utilized in each term was significantly less than the area available (43% to 65%). The RPFO author expressed concern over the impact on forest health associated with an aging forest. Conifer utilization tended to be higher than hardwood, although poplar showed noticeable increase from approximately 30% to 50%. The only other data presented in Table RPFO-18 was for Native communities involved in the special Native consultation program. It indicated 100% of communities were involved in 2001-2006.

Table RPFO-19 (frequency distribution of clearcuts and wildfires) contained data for a single plan term (1996-2001). The text indicated that no wildfires occurred on the Forest from 1991 to 1996. No data was presented for a suggested distribution of disturbances but actual figures indicated that the frequency of disturbances was consistent with current direction (i.e., a small number of large disturbances with large disturbances accounting for most of the total disturbed area).

3.7.3 Review of the Comparison and Trend Analysis of Planned versus Actual Forest Operations

As part of the audit, the auditee prepares a summary of activities over several plan terms. This is known as the Comparison and Trend Analysis of Planned versus Actual Forest Operations Report. It provides a historical perspective on forest management activities and the forest condition. The Trend Analysis Report for the Forest spanned 15 years of planning and operations between 1991/92 and 2005/06. The Report was submitted on time and met content requirements of the IFAPP and is included in this report as Appendix A.

Table 1 of the Report shows the area under management over the three plans. Reductions to the landbase have taken place over the terms. The most prominent of these was the removal of the Gravel River portion of the Forest in the 1991-1996 period. Subsequent removals, as a result of the Ontario Living Legacy exercise, have decreased the landbase by 18% over the 15-year period.

Trend Analysis Report Table 2 depicts the FUs by FMP over the 15-year term. There were six FUs in the 1991-1996 Plan, nine in the subsequent 1996-2001 Plan and ten in the 2001-2006 FMP. There was no change in the silvicultural system used. The major shift over the timeframe is in the mixedwood and balsam fir FUs. There are now two balsam fir FUs to better identify and manage the species after a serious budworm infestation on the Forest. The 1991-2001 classification of the spruce and jackpine FUs into the 2001-2006 mixedwood FUs better describes the on-the-ground situation. This should improve the estimates of volume and operational planning.

Tables 3 and 4 of the Trend Analysis Report and the accompanying descriptions of the differences between planned and actual harvest volumes and harvest areas were satisfactorily explained. Over the 15-year period, the ratio of actual to planned harvest volumes changed from 36% to 54%. Similarly, the ratio of actual harvest area to planned areas increased from 43% to 68%. Both are improvements, however there is much progress to be made. Rugged terrain and low volume stands in certain areas of the Forest, and the lack of markets, were the major causes of the low ratios noted above.

Trend Analysis Table 6 illustrates the Renewal, Tending and Protection program on the Forest. Generally, the levels of actual regeneration and site preparation activities compared to planned, was very low. As well, site preparation activity was extremely low. This situation is discussed in Section 3.4.3 Renewal. An exception is planting during the current term; actual accomplishment was higher than the level planned due to the renewal of salvaged portions of the Nipigon 75 fire. Chemical aerial tending levels increased over the planning terms. The explanations for the differences were clearly expressed.

Table 7 of the Trend Analysis Report deals with the summary of area successfully regenerated. There were 1,159 ha during the 1991-1996 term that required a FTG assessment. While a portion of the area was flown in 2003, the evaluation produced unreliable results. This meant that no areas were declared FTG during this audit term. GWTL completed surveys in 2005 and 2006, but the ARs were not yet approved. Therefore, they were in the second year of completing their requirement for this audit term and for those areas that should have been assessed in the previous audit term.

It is noted here and in Section 3.6.1 General Monitoring - Silviculture that the previous IFA made Recommendations to address and remedy the lack of FTG assessments during the previous term. The data upon which this Recommendation was based and which was provided by GWTL, has proven to be faulty. The amount of land in need of FTG surveys was less than originally identified. This audit team does not characterize the amount of land requiring FTG surveys as a significant backlog but has recommended that GWTL further investigate the status of the inventory in respect of lands requiring FTG survey.

The trends over the 15-year period were appropriately identified and frankly expressed. The explanations of differences between planned and actual levels were rationally described. The audit team's examinations of other documents and their observations in the field are consistent with the evidence shown in the Trend Analysis Report.

3.7.4 Achievement of Forest Sustainability

Prior to the implementation of the CFSA, the objective of forest management was to provide timber to the forest industry in a manner consistent with sound environmental practices and to provide for other uses of the forest. With implementation of the CFSA in 1994, recognition was given to the importance of forest sustainability. It should be kept in mind that the means of achieving forest sustainability under the CFSA is through the management of forest cover. Forest sustainability is defined by the CFSA as long-term Crown forest health. Two key principles are associated with forest sustainability:

- Large, healthy, diverse and productive Crown forests and their associated ecological processes and biological diversity should be conserved.
- The long-term health and vigour of Crown forests should be provided for by using forest practices that, within the limits of silvicultural requirements, emulate natural disturbances and landscape patterns while minimizing adverse effects on plant life, animal life, water, soil, air and social and economic values including recreational values and heritage values.

The methods of planning for and assessing the achievement of forest sustainability are described in the 1996 FMPM for plans prepared under the requirements of this manual. It begins with a process that includes gathering background information, setting objectives and developing strategies, identifying and analyzing management alternatives, selecting a preferred management alternative, and identifying specific areas for forestry operations. Throughout the process, opportunities are available to the public to participate and provide input into the development of the FMP. The assessment of achievement of forest sustainability involves the analysis of trends associated with a set of criteria and indicators of sustainability as given in the FMPM. The 2001-2006 FMP used the six forest sustainability criteria which are listed in Table 7.

The problem of defining forest sustainability continues to be a concern shared by the audit team and forest managers in Ontario. In recognition of these problems, the 2004 FMPM emphasizes management by objectives and replaces a formal analysis of forest sustainability with a qualitative assessment. The following qualitative assessment of sustainability is made in the context of this direction.

One of the most effective ways in assessing sustainability is during the on-the-ground site inspections. The important issue in this regard for the audit team at each site is to examine the surrounding mature forest and the record of the forest conditions prior to harvest. They can then evaluate whether the forest renewal activities were consistent with the plans and suited to the forest and site conditions.

Table 7 shows the six criteria which were identified in the FMP and also used by the audit team as indicators to determine the sustainability of the Forest.

Table 7. Summary of assessment of forest sustainability.

Forest Sustainability Criteria	Met (Yes/No/Partial)	Audit Team Comments
Biological Diversity	Yes	
Forest Condition and Ecological Productivity	Partial	The landbase, while reduced in the late 1990s, is now stable. Forest cover is being maintained, but many site-specific treatments from the audit term are projected to yield less timber than originally planned. The FTG backlog must be surveyed, assessed and reported.
Soil and Water Quality	Yes	Both are being maintained. Ground water recharge zones are being considered.
Global Ecological Cycles	Yes	
Multiple Benefits to Society	Partial	Full harvest and wood supply commitments were not met. The local First Nation is benefiting from operations. Utilization needs improvement. Insufficient effort to maximize site potential and timber production.
Accepting Society's Responsibility for Sustainable Development	Partial	The LCC membership needs review. Equitable overlapping licensee allocations made. Recreational activities are being maintained at acceptable levels.

In the light of the audit team's evaluation of the above criteria, the aerial and on-the-ground inspections of the Forest, the examination of the achievement of management objectives (Section 3.7.1), and the analysis of trends (Section 3.7.3), it is the judgement of the audit team that the Forest is being managed sustainably with the exceptions noted in the Report.

3.8 Contractual Obligations

The terms and conditions of GWTL's most recently executed SFL dated March 1, 2006 were examined by the audit team and, with three important exceptions, were met by the licensee. The first exception was that some of the previous IFA Recommendations and subsequent action plans were not fully met. Secondly, there was non-compliance with the FMP and the Forest Compliance Handbook and lastly the lack of measurement of regeneration success during the audit term.

The audit team's crucial Recommendations (Recommendations Nos. 8, 9, 12 and 18) address these exceptions.

Wood Supply Commitments and Overlapping Licensees

Appendix E of the March 1, 2006 SFL identified the following wood supply commitments to Buchanan Northern Hardwoods in Thunder Bay, Kimberly-Clark in Terrace Bay and to Levesque Plywood.

1. To make available, by right of first refusal, 5,000 m³ of tree length poplar and up to 20,000 m³ of tree length white birch fibre annually to the Buchanan Northern Hardwoods Inc. sawmill in Thunder Bay. This supply of poplar and white birch is consistent with a letter dated October 21, 1996 from the Minister of Natural Resources to Ken Buchanan, President of Buchanan Northern Hardwoods Inc.
2. To make available annually, through a long-term memorandum of agreement, 41,000 m³ of poplar wood fibre to the Kimberly-Clark Inc. mill in Terrace Bay, Ontario. This supply of poplar is consistent with a letter from the Minister of Natural Resources dated May 2, 1995 to Dick Mannisto, Vice President of Woodlands for

Kimberly-Clark Forest Products Inc. (now Kimberly-Clark Inc.). A copy of the executed memorandum of agreement must be provided by the Company to the Ministry upon request.

3. To make wood fibre available to Levesque Plywood Limited through a long-term memorandum of agreement in accordance and consistent with Supply Agreement 536232 dated December 5, 2005. The Company must enter into and execute the memorandum of agreement within six months of the amendment of this licence for the inclusion of this condition. A copy of the executed memorandum of agreement must be provided by the Company to the Ministry upon request. The requirements for a memorandum of agreement are not applicable where Levesque Plywood Limited is a shareholder of the Company.

It should be noted that the completion of the conditions of the third Wood Supply Commitment was beyond the audit term.

The memorandum of agreement (MOA) was developed and executed with Kimberly-Clark. Kimberly-Clark sold its Terrace Bay facility to Neenah Paper which in turn sold the mill in late summer 2006 to Buchanan Forest Products. New wood supply commitments for this mill are currently under development. The audit team also looked at the April 20, 2005 SFL amendment which contained six wood supply commitments.

The Special Conditions of the SFL's Appendix F, regarding signing MOAs to provide for harvesting operations on the Forest, were executed with KDSL and PRDC. These two enterprises are OLLs.

During the audit term, most of the wood supply volumes were not met. For example, for the first four years of the audit term, Buchanan Northern Hardwoods only received a small portion of its poplar commitment (approximately 3%) and Dubreuil Forest Products received about one-third of the committed conifer sawlogs. This was not conclusive as the harvest volume values for the 2005/06 year were not available to the audit team. While some commitments were not met, sharing arrangements were carried out during the audit term.

The required MOAs were in place during the audit term. In addition, the March 1, 2006 revision (executed in May 2006) to the SFL required GWTL to complete an MOA with Levesque Plywood by November 2006. In the 2006-2011 FMP, Table FMP-24 included the Levesque poplar veneer commitment of 17,200 m³ for the five-year term. This appears to be an overstatement as the SFL document used in the development of the final 2006-2011 FMP identified 2,000 m³ per year (10,000 m³ for the five-year term). However, it appears that, in anticipation of the March 1 revision to the SFL document, the increased commitment to Levesque was used in FMP-24. Nonetheless, the annual poplar volume available to Levesque for the term 2006-2011 is 11,160 m³, just above their original commitment level.

The SFL document amendment of March 2006 also removed the Marathon Pulp and Paper and Dubreuil Forest Products commitments and changed the Levesque Plywood commitment. Nonetheless, there are still changes that should be made to the SFL document to better align commitments with the available timber resource. For example, Table FMP-24 in the 2006-2011 FMP indicated that, for the five-year term, the Buchanan Northern Hardwoods poplar commitment would not be met (25,000 m³ committed versus 6,000 m³ available). The former poplar commitment to Neenah Paper also could not be met since 205,000 m³ was committed and only 132,000 m³ was available. Furthermore, Table FMP-12 in the 2006-2011 FMP indicated that poplar volumes will decrease through time. Therefore, although sharing of the available resource was planned in the 2006-2011 FMP (i.e., Buchanan Northern Hardwoods and Terrace Bay were predicted to receive a proportionate amount of poplar during the 2006-2011 term), the Forest was not predicted to be capable of producing the stated poplar volumes. Additionally, in any new commitments, the audit team urges that any opportunity to increase white birch fibre use at the Terrace Bay Mill should be considered.

As noted in Section 4.2, roadside utilization was poor during the audit term and was not always in accordance with the Scaling Manual. At almost every roadside site audited there was merchantable timber left including conifer sawlogs in varying amounts. Some of this volume had been scaled but was now starting to deteriorate on site. Merchantable timber was also frequently mixed with slash. Leaving merchantable timber at roadside is a

wasteful practice and is inconsistent with the goal of meeting the volume commitments described above. A Recommendation to remove all merchantable timber from roadside is made in Section 4.2.

Pricing

GWTL, as a part of Buchanan Forest Products Ltd. group, entered into a written agreement with MNR to defer the payment of stumpage and forest renewal charges effective December 2005. The agreement includes an undertaking to repay all these charges with interest in accordance with the CFSA when the deferment ends.

The audit team received a letter from Buchanan Forest Products Ltd. describing the nature of the confidential arrangement and has examined the relevant Royal Trust Summary of Accounts for the Forest's Renewal Trust Account. The audit team is satisfied that the agreement is permitted under the CFSA and that it is within the purview of the Minister. It should be noted that the audit team has not seen the actual agreement between MNR and Buchanan.

Manuals

The Forest Information Manual assigns responsibilities for collection of information necessary for forest management including inventories, surveys, tests and studies. GWTL maintained information on timber depletions and accruals and incorporated this information into planning for the 2006-2011 FMP. New values information (an osprey nest) was reported by operations and protection measures were taken. FTG surveys were ongoing at the time of the audit. Forest operation prescriptions were prepared for all harvest blocks and GWTL also prepared and implemented a compliance plan and submitted compliance reports. Information necessary for completion of ARs was also collected and reported. Maps documenting annual activities were also submitted with the ARs. Several deficiencies were noted in the content of the 1996-2001 RPFO.

In July 2002 a large fire burned a significant part of the Forest. According to interviews during the audit, MNR and GWTL staff aerially assessed the burned area and agreed to amend the 2001-2006 FMP for salvage operations. On June 13, 2003 the FMP was amended and during the next few years about 467 ha of burned area was harvested and renewal operations occurred over much of this area. All SFL obligations related to natural disturbance and salvage operations were met and salvage operations were well done. The team observed that utilization was good and areas with unburned timber were not harvested.

This section of the obligations states that the licensee shall abide by the FMP as well as the Crown Forest Sustainability Act and Manuals. The team found that the 2001-2006 FMP's White Birch Strategy was not followed and that the requirements of the Forest Compliance Handbook were not met. As a result, the team has made two crucial Recommendations (8 and 9) to address these non-compliances.

Independent Forest Audit Action Plan and Status Report

The following Table identifies the audit team's assessment of the previous IFA action plan achievement.

Table 8. Audit team's assessment of the status of previous IFA Recommendations.

2001 IFA Recommendation	Status Report	Audit Team Comment
FMP training	Ongoing	Agree
MNR meet with remote tourism operator	Incomplete	Attempts by MNR to contact operator have not been successful
Timely FMP improvement project completion	Complete	Agree
MNR direction regarding the implementation of EA Term and Condition 77 to be shared	Complete	Agree

Table 8. *continued*

2001 IFA Recommendation	Status Report	Audit Team Comment
Realistic assessment of operational constraints	Incomplete	Additional information required Recommendation 4 & 10 Suggestion 5
Improve AOC information	Ongoing	Agree
Identification and documentation of past bypass areas	Incomplete	Continual updates required Recommendation 10 Suggestion 5
Provide a slash management strategy and resolve	Strategy complete, implementation incomplete	No detectable progress on the ground Recommendation 12 Suggestion 4
Eliminate FTG backlog within two years	Incomplete	The area of backlog was over-estimated by the previous IFA auditor. GWTL completed a material, but not adequate, amount of surveys in 2005 and 2006. Recommendation 18
Extension of SFL	Extended on May 12, 2005	Agree

The team thus disagrees with some conclusions of the June 2005 Action Plan Status Report. The audit team also examined the MNR Forest Resources Branch summary Status Report which was supplied to MNR Nipigon District and GWTL. The Status Report deals with the progress and actions taken with regard to the Recommendations of the previous 1996-2001 IFA. This audit team has made two Recommendations (Nos. 12 and 18) regarding these matters and urges both MNR and GWTL to continue their efforts to implement these past-due Recommendations.

Forest Renewal Trust Charges, Minimum Balance and Records

The Forest Renewal Trust conditions were met with the exception of the recent deferment of the payment of renewal charges. The explanation for this situation is described above in this section (Pricing).

The balance at March 31, 2006 was \$1,965,533.72. The end-of-year balances over the previous four years were significantly above the Minimum Balance required. The Minimum Balance of the Forest's Renewal Fund is \$810,700.00 as stated in Appendix D of the Licence. There are no sub-accounts in the Forest's Renewal Trust.

GWTL maintained good records and conformed to the eligibility criteria stated in Appendix C when submitting invoices for payment. The record keeping and payment request system is currently being converted from partial manual to a full electronic system. During the audit term the renewal charges were re-assessed and the required process was used. The conifer charge was reduced to \$2.00 per m³ and the hardwood charge remained at \$0.50 per m³. The main reason for this adjustment was to reduce the charges, and thus payments, into the Account as very large inflows were occurring. This would then result in a better balance between charges and the costs of the silvicultural program.

The audit team observed that the monetary amount of the balances at each year-end during the audit term was sufficient. The balances have ranged between two and three times that of the minimum balance. The audit team's observation is that while there have been large amounts of money available for re-imburement, little has

been drawn down even with the reduction in the conifer rate. The audit team concluded earlier in this report that while a lower cost silvicultural program in the field may meet minimum standards, this effort has not increased silvicultural effectiveness, rather it may have diminished it.

The audit team reviewed the list of the specified procedures projects from the 2004/05 silviculture program and conducted an assessment of a sample of projects as described in the footnotes of Table 1 in Section 2 E of this report. The assessment determined that the field work viewed was appropriate and was suited to site conditions.

Silvicultural Standards

The audit team found that the records of silviculture treatments matched observations in the field. Field binders generated from various planning documents were very accurate and are a good check against record keeping. In excess of 20% of the silviculture program was inspected including the specified procedures. Activities reported in ARs matched field observations with the one exception being a chemical site preparation project (reported) which was actually a chemical tending project.

GWTL had good and complete records of Class Y and Z lands and all areas were addressed appropriately in that they received silvicultural treatments or were designated for natural regeneration. The final success of regeneration on these lands will be determined when the FTG assessments are completed.

As discussed in the monitoring section, no FTG was reported for this audit term or for the previous term. However, approximately 5,000 ha of survey results will be reported in the 2005/06 AR. The audit team inspected some of the results from the retracted 2003 survey program and also from the 2005 program. The team's observations in the field, including one on-the-ground survey in the Foxtrap area and numerous aerial surveys, generally concur with the un-reported results of the 2005 survey. In the opinion of the audit team, the reported heights are uniformly under-estimated across the entire survey however species composition and density appear to be accurate.

The failure to achieve the desired level of FTG surveys during the audit term is an important shortfall. However, the decision to retract the results from the 2003 survey reflects a commitment to data quality on the part of GWTL.

Aboriginal Opportunities

An outstanding accomplishment of MNR and GWTL is the provision of an opportunity for the Pic River First Nations to become an OLL on the Forest. The Pic River Development Corporation was an active proponent of this arrangement. The Corporation is a key harvester on the Forest and currently has one-third of the annual harvest allocation. Their operations are generally of good standard and provide significant and reliable quantities of furnish to mills. They are now developing a self-compliance program. As a result of these initiatives and actions, the audit team is of the opinion that this is a Best Practice.

Best Practice 1: The actions of the Ministry of Natural Resources and Great West Timber Limited, together with the advocacy of the Pic River Development Corporation, to provide opportunities to participate in forestry operations on the Forest, are exemplary.

Compliance

As noted in Section 3.6 Monitoring, GWTL developed and implemented a five-year compliance plan for the 2001-2006 FMP, delivered a prevention/education program, completed annual compliance schedules for each year during the audit term, and updated the five-year compliance plan for the 2006-2011 FMP. In addition, all FOCIS/FOIP reports were provided to MNR as required. Although the plans addressed all of the SFL conditions related to compliance monitoring, there were recurring compliance issues on the Forest (e.g. crossings, utilization and snags). A Recommendation aimed at reducing these issues is made in Section 3.6 Monitoring.

Overall, it appears that the GWTL compliance program is effective as some types of non-conformance were reduced or eliminated during the term (e.g. safety equipment and trespasses). However, there were a number of issues related to OLL compliance during the term. OLLs became fully responsible for completing compliance inspections on their operations for the start of the 2006-2011 FMP, as directed by the new five-year Compliance Plan.

Mining Claims

After receipt of the AWS from GWTL, MNR must contact mining claim holders if forestry operations are planned to occur near their claims. Concerned parties are then directed to consult with GWTL. The audit team viewed the records associated with AWS notice and approval and the requirements were met. GWTL indicated there were no issues with mining claim holders.

4.0 Summary of Conclusions and Recommendations

This Report presents the findings and conclusion of the audit team for the IFA conducted on the Pic River Ojibway Forest for the 2001-2006 period. This was the second IFA on the Forest, the first one having covered the 1996-2001 term.

As stated at the closing meeting of the site visit and again here in the text of the Audit Report, five Recommendations, now identified as Recommendations Nos. 8, 9, 12, 14 and 18, were mentioned then as of serious concern and are repeated now and termed crucial. The audit team believes that these five are paramount in importance and must be addressed effectively and promptly. Action must be taken on the other Recommendations for improvement as well.

As a result of these concerns and findings, the audit team recommends that licence extension be deferred until satisfactory progress has been made by GWTL, MNR and the OLLs on these five specific Recommendations.

The following sums up the audit team's reports on the eight guiding principles of the IFAPP. The details which underlie these comments are to be found in the relevant sections of the Report.

Commitment

Both GWTL and MNR are committed to sustainable forest management in their policies and planning. GWTL distributes its policy and operational control procedures using an intranet system and bulletin boards in its offices.

GWTL followed its Five-year Compliance Plan and Annual Plans of Action during the audit term. MNR completed spot inspections and follow-up inspections with the exception that it did not complete the minimum specified number of compliance inspections for the last two years of the audit term. MNR has been asked to address the situation in a Recommendation.

Public Participation

The Terrace Bay LCC performed its functions satisfactorily; however, attracting new members to refresh the Committee has proved difficult. Part of the difficulty lies in members having to travel long distances to attend meetings and also the dire straits that local citizens of these communities find themselves in as a result of mill shutdowns. During the audit term, some members representing crucial interests have not attended for extended periods. The LCC has not revised their Terms of Reference to conform to the 2004 FMPM. Action is recommended on this matter.

There are four First Nations adjacent to the Forest and three requested a position on the FMP planning team and attended team meetings and community information centres. Agreement was reached that FMP notices need not be sent out in Native language. The Pic River Development Corporation, the development arm of the Pic River First Nation is an OLL on the Forest with one third of the annual harvest allocation. This is a significant and important circumstance. GWTL, MNR and PRDC deserve much credit for forging this arrangement.

Forest Management Planning

Planning generally met the requirements of the FMPM. The planning team performed well and despite a late start and the lateness of their approved terms of reference, the 2006-2011 FMP was completed on time.

The Forest was adequately described in the Plan and the 1988 FRI photography and updates until June 2004 were used for the planning inventory. Species at risk were identified in the FMP.

The audit team had a concern with regard to the SFMM modelling and that involved establishing accurate parameters and how the results were reviewed. A series of Recommendations are made for both GWTL and MNR

to take action in order to avoid this situation in the planning for the 2011-2021 FMP. While of concern, it is essentially the process and reporting deficiencies that have to be addressed. This did not translate into serious on-the-ground effects.

The approach to operational planning was satisfactory and the SGRs adequately completed. Harvest, renewal and maintenance area selections were consistent with the selection criteria.

AOC prescriptions were properly developed. Ground Water Recharge Zones were considered in the planning of harvest and road operations, but trial prescriptions are not currently monitored for effectiveness. The audit team suggests that monitoring be undertaken. Plan review and approval could have proceeded more efficiently and improvements to this area must be made. Plan amendments were well managed and GWTL's AWSs were generally acceptable.

Plan Implementation

The AOCs that were inspected in the field were implemented according to their prescription without exception. The 2001-2006 FMP was developed and implemented using the required direction for marten habitat. The 2002 NDPEG guide stipulates an increased number of trees and recommends that a range of species be retained on harvest areas. Harvest activities were generally satisfactory over the term and fewer infractions occurred later in the period. Salvage operations were well conducted. Soil disturbance was negligible.

While most prescriptions were implemented appropriately, partial harvest in mixedwood stands was the exception. The removal of conifer volumes and the leaving of almost all hardwood in some stands, particularly white birch, did not follow the 2001-2006 FMP and is not permissible according to the Silviculture Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Forest Ecosites in Ontario. The Guide states that should the residual trees not be treated, "the stand will be considered high-graded." This situation is in contravention of Section 1 of the CFSA. The audit team makes a series of Recommendations including a crucial Recommendation (No. 9) which systematically address the situation and requires that this no longer occur. The suspension of some harvest blocks ostensibly in order for market conditions to improve did not meet the requirements for compliance with either the 2001-2006 FMP or the CFSA. A Recommendation (No. 8) is given to correct this practice.

Poor roadside utilization and slash pile management were observed and both GWTL and the OLLs are required to address this problem through Recommendation No. 12.

The renewal program was implemented adequately with planting slightly exceeding the planned level. However, seeding was not conducted and natural regeneration has yet to be reported. There was a significant reduction in mechanical site preparation over the audit term compared to the forecast. The audit team observed poor survival results on non-site prepared areas and the sites will likely not achieve their full potential. The focus on lowering silvicultural costs on many productive sites by not conducting mechanical site preparation will most probably not achieve the FMP's objectives or produce better than minimal results. The audit team was impressed with the observed quality of the older Crown and company work and have doubts that the current efforts will achieve that level of success.

GWTL had an effective chemical aerial release program which bodes well for plantation development.

In the opinion of the audit team, the intensity and effectiveness of the silvicultural program decreased over the audit term. The emphasis on lower cost silvicultural alternatives and the diminishing use of mechanical site preparation has been the cause. A Recommendation (No.14) has been made to address this situation.

Road access standards were generally good including tertiary roads. Water crossings were located properly and met standards. No serious problems were encountered; however, a few culverts were perched or partially

collapsed. Two aggregate pits did not meet provincial requirements and the audit team recommended that this be addressed.

The audit team was asked to review work completed and invoiced for the new across-industry agreement for Road Maintenance. The audit team found that the evidence was not always verifiable and asked MNR to reconsider this protocol in the IFAPP.

System Support

Both GWTL and MNR undertook training of staff in a range of activities including compliance and water crossings, and communicated well. As the OLLs take on a bigger role in the compliance program, it will take increased liaison and effort to ensure that the standards are met. Document control in the Manitouwadge office requires improvement to preclude faulty or out-of-date information being used.

Monitoring

While there was little discussion of silvicultural effectiveness monitoring in the FMP, GWTL has a detailed program of silvicultural monitoring. Its FOCIS and FOIP reports were examined and found to be good order. Overall, the audit team found that GWTL's silvicultural effectiveness monitoring program was satisfactory. However, there is a singular exception and that involves the surveying and reporting of FTG results.

The lack of FTG information in this audit term and during the last IFA term must be addressed by taking action on the audit team's Recommendation. Action on-the-ground using large-scale aerial photography has been underway for two years. Results were un-reported at the date of the audit site visit. As part of the aerial inspection of the Forest, the audit team observed some of the surveyed areas and generally concurred with the draft un-reported results.

MNR developed a five-year Compliance Plan for the 1998-2003 period which was not updated. The Region then produced a Compliance Strategy which the Districts are obligated to follow. Nipigon District is urged to follow the cost-effective ways of meeting compliance standards. MNR prepared ACOPs, but allowed the frequency of inspections to fall during the latter years of the audit term to levels which may not have been sufficient considering the compliance issues noted.

GWTL also produced compliance plans which were kept current. This included introducing self-compliance to the OLLs. The audit team, through its examination of documents and its observations in the field, noted recurring issues and the team makes Recommendations in an attempt to eliminate repeated occurrences of the same problem. As discussed above, the non-compliant suspension of harvest blocks must be addressed urgently as the 2001-2006 FMP has expired and the blocks are not mentioned in the 2006-2011 Plan.

Annual Reports for the first four years of the audit term were reviewed by the audit team and generally met requirements. The RPFO was weak in the areas of silvicultural planning, tables were missing, and the conclusions were of little use for the development of the succeeding plan. The requirement for the RPFO (for this Forest) will be phased-out in November 2006 by the year ten AR in conformance with the 2004 FMPM.

Achievement of Management Objectives and Forest Sustainability

The audit team reviewed the degree of achievement that the 2001-2006 FMP made in meeting its stated objectives and the audit team's opinion is shown in Table 6.

The overarching objectives of provision of Forest Diversity, Forest Cover, Social and Economic Matters were met. There was one exception and that dealt with the supply of sawlogs which was partially met. Approximately half the planned conifer sawlog volume was supplied to wood processing facilities from the Forest.

The set of three silviculture objectives were partially met. The reasons for the audit team's opinion were: some lack of silvicultural effectiveness due to efforts to lower expenditures on renewal operations; some treatments might meet minimum standards, but enhancing sawlog production was unlikely; and, the aforementioned FTG situation.

The audit team assessed forest sustainability against the six criteria given in the 2001-2006 FMP. Four were met and two were partially met as shown in Table 7. The lack of FTG information should be a priority for action and has resulted in Recommendation 18.

The audit team examined the Trends Analysis Report and was satisfied that the trends over the last 15-year period on the Forest were appropriately stated. The audit team's on-the-ground observations confirmed the author's view.

The audit team concluded that the Forest was achieving its management objectives with the exceptions noted. These exceptions and their accompanying crucial Recommendations must be acted on immediately by GWTL and MNR. The resulting improvements will reduce the risk of the next IFA coming to a conclusion that the continuing failure to address the crucial factors, such as keeping up-to-date with FTG assessments, silvicultural effectiveness, following sound harvesting practices and improved roadside slash management, will jeopardize sustainability.

Contractual Obligations

The terms and conditions of GWTL's SFL Licence No. 542440 dated March 1, 2006 were met with the exception of three important conditions, namely failure to meet some of the action plans developed to implement the previous IFA's Recommendations, non-compliance with the FMP and the Forest Compliance Handbook, and the lack of measurement of regeneration success.

Wood supply commitments changed during the audit term and new contemporary supply directives were put into place. Further changes should be made to better align poplar commitments with the available supply from the Forest. As well, further efforts should be made to use the available white birch volumes on the Forest. Utilization of roadside merchantable timber is the subject of a Recommendation for improvement.

GWTL did not follow the approved 2001-2006 FMP with regard to its white birch strategy or the requirements of the Forest Compliance Handbook with regard to block suspensions. Recommendations Nos. 8 and 9 addresses this situation.

Two important Recommendations from the previous IFA audit were not met. They involve slash management and FTG surveys and these items are re-addressed by this audit team's Recommendations.

The Forest Renewal Trust was well managed, records are in place, eligibility criteria were met and procedures were followed. End of year balances were far in excess of the minimum balance. The recent temporary deferment of the payment of Crown renewal charges by GWTL is dealt with in Section 3.8 Contractual Obligations.

Conclusion and Recommendation

The audit team wishes to make two final points. Firstly, during its on-the-ground and aerial inspections of the whole Forest the team observed that a healthy productive forest exists beyond the field stops. While the southerly portion of the Forest is indeed topographically rugged, thinly soiled and has presented operational challenges, the more central and northerly parts contain a well stocked growing forest which is providing good habitat and other values. Figure 13 in Section 3.4.3 and the cover page are examples of vigorous, well stocked, new forest growth as witnessed by the audit team.

Secondly, there are five crucial Recommendations which we urge GWTL, MNR and the OLLs to work immediately and co-operatively to address through an action plan. They are Recommendations Nos. 8, 9, 12, 14 and 18. They involve improvement of the approach to harvest block suspension, that the 2006-2011 FMP hardwood strategy is strictly followed, that roadside logging slash is reduced, that silvicultural effectiveness is assessed, and that the outstanding Free-To-Grow areas be assessed and reported. Should the five crucial Recommendations identified above not be addressed effectively, the next IFA will, in the audit team's opinion, raise very serious concerns about the Forest's sustainability.

To forestall these concerns, the audit team concludes that the extension of SFL Licence No. 542440 be deferred subject to an independent verification that satisfactory progress has been made with regard to the five crucial exceptions noted above in this Report.

The audit team's strong intention is that the independent verification not be elaborate or time-consuming. The team does not recommend an expensive re-audit. It should focus specifically on assessing the progress made with respect to the five crucial recommendations only. The verification should be carried out by a qualified individual or organization and it should be efficient and economical. It should not involve more than two days and should include both an office and field visit.

Once this progress has been made, the audit team recommends that the Licence be extended immediately to its full term. Should the assessment identify that progress has not been made, the team does not recommend extension. Thus, the team makes the following closing Recommendation.

Recommendation 24: The audit team recommends that the Minister defer the extension of Great West Timber Limited's Sustainable Forest Licence No. 542440 until March 31st 2010, at which time an independent individual or organization will verify that satisfactory progress has been made to address the five crucial Recommendations (Nos. 8, 9, 12, 14 and 18) of this Report. Should satisfactory progress have been made, the team recommends that the Minister extend the licence to the full term of March 31st 2028. Should satisfactory progress not be made, the audit team does not recommend licence extension.

Table 9. Summary of Recommendations, Suggestions and Best Practices.

Principle 1: Commitment
None
Principle 2: Public Participation
Recommendation:
1: The Ministry of Natural Resources must ensure that the Local Citizens Committee reviews and updates the Terms of Reference and membership to meet the requirements of the 2004 Forest Management Planning Manual.
Principle 3: Forest Management Planning
Recommendations:
2: Great West Timber Limited must ensure that all plan documentation provides a consistent, thorough and accurate description of model parameters and results in the 2011-2021 Forest Management Plan.
3: Great West Timber Limited must update the 2006-2011 Forest Management Plan with a corrected version of Table FMP-13.
4: Great West Timber Limited must review growth and yield estimates, Forest Resource Inventory parameters and utilization constraints to ensure that there is consistency between planned and actual volumes during the development of the 2011-2021 Forest Management Plan.
5: Great West Timber Limited must ensure that for the 2011-2021 Forest Management Plan, the revenues and expenditures forecast table is completed correctly and the related text includes all the required information.
6: District and Regional Ministry of Natural Resources must conduct an assessment of the review and approval process used for the 2006-2011 Forest Management Plan and identify causes and solutions for oversights in the assessment of Management Alternatives.
7: Great West Timber Limited must ensure that the required alterations are addressed and that actions taken to address them are documented during the production of the 2011-2021 Forest Management Plan.
Suggestions:
1: The Ministry of Natural Resources and Great West Timber Limited should ensure that the Terms of Reference for the 2011-2021 Forest Management Plan are approved prior to the issuance of the First Public Notice.
2: Great West Timber Limited should review model succession rules to ensure that there is agreement between pre- and post-succession volumes during development of the 2011-2021 Forest Management Plan.
3: The Ministry of Natural Resources should develop a program to determine the effectiveness of the Ground Water Recharge Zone Area of Concern prescription.
4: Great West Timber Limited should ensure that a certified Forest Operation Prescription is appended to the Annual Work Schedule whenever the prescription changes during the year regardless of whether an Annual Work Schedule revision is required or not.

Table 9. Continued

Principle 4: Plan Implementation
Recommendations:
8: The Ministry of Natural Resources must evaluate blocks partially harvested during the 2001-2006 audit period for compliance with the Forest Management Plan and the Crown Forest Sustainability Act. 9: Great West Timber Limited and the Ministry of Natural Resources must ensure that the birch strategy outlined in the 2006-2011 Forest Management Plan is strictly followed. 10: Great West Timber Limited must reduce the future area of harvest bypass on the Forest. 11: Great West Timber Limited and the Overlapping Licensees must ensure that marketable timber is removed and utilized from all roadsides in the future. 12: Great West Timber Limited and the Overlapping Licensees must follow the slash management program outlined in the 2006-2011 FMP, including the treatment of older slash. 13: Great West Timber Limited must report natural regeneration in its Annual Reports, in accordance with the requirements of the Forest Management Planning Manual. 14: Great West Timber Limited must ensure that its silvicultural treatments are effective in achieving the desired future forest condition as defined by not only minimum regeneration standards, but also in terms of prescribed management intensity and associated yields. 15: Great West Timber Limited and the Overlapping Licensees must meet the requirements for setbacks and rehabilitation of aggregate pits. 16: The Ministry of Natural Resources must review the effectiveness of conducting an independent review of the Road Maintenance Agreement through the Independent Forest Audit process.
Suggestions:
5: Great West Timber Limited should review operator performance to minimize bypass and, where required, provide appropriate guidance and training to improve performance. 6: Great West Timber Limited should re-evaluate its use of direct planting on sites with deep duff layers or with excessive logging slash in order to ensure the effectiveness of these treatments. 7: Great West Timber Limited and Overlapping Licensees should consider installing alternative water crossing structures where substrate conditions do not permit a round pipe. 8: The Ministry of Natural Resources should consider a role for Districts in the field verification of work performed under the Road Maintenance Agreement. 9: The Ministry of Natural Resources should review the adequacy of requirements for supporting evidence, including third party records of work completed, for invoices submitted under the Roads Maintenance Agreement.
Principle 5: System Support
Recommendation:
17: Great West Timber Limited must implement a system to ensure that all planning and operational documents related to the Forest are kept up-to-date, properly identified and located, and protected against unintended use if obsolete.

Table 9. Continued

Principle 6: Monitoring	
Recommendations:	
18:	Great West Timber Limited must examine its planning inventory to ensure that all of the areas eligible for Free-To-Grow survey were identified and must document these findings by amending Table FMP-28. Based on the results of this investigation, Great West Timber Limited must ensure that the current pace of Free-To-Grow surveys is continued so that the program is up-to-date.
19:	The Ministry of Natural Resources must complete the appropriate number of compliance inspections to match the level of risk and compliance issues on the Forest.
20:	Great West Timber Limited, the Overlapping Licensees and the Ministry of Natural Resources must ensure that the recurrence of similar operational compliance issues is reduced significantly in number on the Forest.
21:	Great West Timber Limited, Overlapping Licensees and the Ministry of Natural Resources must conduct mutual site visits to promptly resolve any concerns in harvest blocks with outstanding suspended status reports, conduct final inspections and complete inspection reports, to bring closure to these harvest areas.
22:	Great West Timber Limited and Overlapping Licensees must complete harvest, haul and clean-up operations prior to starting silviculture operations.
23:	The Ministry of Natural Resources and Great West Timber Limited must ensure that the Annual Reports include all the required information and discussion and that accurate records of submission dates are recorded.
Suggestions:	
10:	Great West Timber Limited should include monitoring the success of natural regeneration areas as part of its program of silvicultural effectiveness monitoring.
11:	The Ministry of Natural Resources should review supplementary aerial photography annually for compliance purposes.
12:	The Ministry of Natural Resources and Great West Timber Limited should consider partial block completions to allow for timely silviculture treatments.
Principle 7: Achievement of Management Objectives and Forest Sustainability	
None.	
Principle 8: Contractual Obligations	
Best Practice:	
1:	The actions of the Ministry of Natural Resources and Great West Timber, together with the advocacy of the Pic River Development Corporation, to provide opportunities to participate in forestry operations on the Forest, are exemplary.
Conclusions	
Recommendation:	
24:	The audit team recommends that the Minister defer the extension of Great West Timber Limited's Sustainable Forest Licence No. 542440 until March 31st 2010, at which time an independent individual or organization will verify that satisfactory progress has been made to address the five crucial Recommendations (Nos. 8, 9, 12, 14 and 18) of this Report. Should satisfactory progress have been made, the team recommends that the Minister extend the licence to the full term of March 31st 2028. Should satisfactory progress not be made, the audit team does not recommend licence extension.

Appendix A

Comparison and Trend Analysis of Planned versus Actual Forest Operations Report

**PIC RIVER OJIBWAY FOREST - MU 851
GREAT WEST TIMBER LIMITED**

**INDEPENDENT FOREST AUDIT
April 1st, 2001 to March 31st, 2006**

**COMPARISON & TREND ANALYSIS OF PLANNED VERSUS ACTUAL FOREST OPERATIONS
REPORT**



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Date:

August 14th, 2006



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Comparisons and Trend Analysis of Planned vs. Actual Forest Operations Report

Introduction

This comparison and trend analysis report has been prepared in accordance with the requirements of Appendix C of the Independent Forest Audit Process and Protocol (OMNR, 2006).

The period of this Independent Forest Audit (IFA) is April 1st, 2001 to March 31st, 2004 (five fiscal years). The purpose of this report is to evaluate various primary management components on the Pic River Ojibway Forest, to compare planned versus actual levels of forest operations, and to discuss trends as they pertain to the management of the forest.

The FMP tables used to provide the forecasted numbers in the trend analysis have been updated with the amendments that have been conducted during the 2001-2006 FMP.

During the period from 1951 to 1976, operations on the Pic River Ojibway Forest were limited to a number of small operators which operated near Highway 17. In 1970, Abitibi returned the Steel River Concession to the Crown and this area became the Steel River Crown Management Unit. In November of 1976, the Little Pic license area of Ontario Paper was returned to the Crown and became the Little Pic Management Unit. In 1978, these two Crown Units amalgamated to form the Steel River Crown Management Unit (SRMU).

In April of 1998, the SRMU became the Pic River Ojibway Forest. The Pic River Ojibway Forest is within the traditional area of the Ojibway's of the Pic River First Nation. The name chosen for the Forest recognizes and celebrates this fact. The Pic River Ojibway Forest was issued to Great West Timber Limited, and is managed cooperatively by GWT, the Pic River Development Corporation, and Ken Dooley & Son Logging Inc.

Over the scope of the audit there has been a large amount of staff turn over, this has resulted with inconsistent management techniques. Recently the Company has undergone a reorganization that is designed to provide more direction to new staff and to better maintain management consistency through time. This will help to mitigate issues from occurring due to a high rate of staff turnover.

The 1991-1996 and 1996-2001 terms have been annualized by dividing the Planned and Actual numbers by 5 for each of the activities. Planned operations in the 2001-2006 term have been annualized by dividing by 5, while the Actual numbers have been divided by 4 years. Four years was used since the final year of the planning term has not been reported on at the time of the IFA.

Summary of Total Area under Management

Table 1 presents a summary of total area under management for the 1991-1996, 1996-2001 and the 2001-2006 planning terms. During the scope of this trend analysis there have been a few changes to the land base. Since the 1996 FMP a few extractions from the land-base have occurred. The Gravel River portion of the former Steel River Crown Management Unit was removed from the land base and represents about 13,000 hectares or 6% of the original land base. In addition, there were land ownership changes as a result of the Ontario's Living Legacy (OLL) program. These areas have been added to Neys Provincial Park, Fishnet Conservation Reserve, and the Killala Lake Conservation Reserve. The classification of all lands, both managed and unmanaged, have been considered in the Forest Resources Inventory update. The classification is categorized by land ownership (i.e. Crown, patent and other) and land type (i.e. forested and non-forested lands).

The Crown Managed forest area was reduced from the 1991-1996 to the 1996-2001 FMP, when the Gravel River Portion of the management unit was removed from the Steel River MU. This resulted in a reduction of the Management Unit size. The Crown Managed forest area was reduced from the 1996-2001 to the 2001-2006 FMP due to the creation of the Fishnet Lake Conservation Reserve through the Ontario Living Legacy. Neither of the above mentioned Conservation Reserves were regulated at this point in time and are still subject to changes in their boundaries. The reduction was only in the amount of Crown Managed forest area, which is available for harvest.

The Forest Resource Inventory will continue to be updated and maintained with depletion and survey information as it is a continual process that is required to ensure maximum available land base for forest management purposes.

General Trends

- The changes that have occurred with the addition of a new Conservation Reserve have had an impact on the overall managed landbase, but not one with the same magnitude as the removal of the Gravel River portion of the Management Unit. This decreasing trend in Managed Forest may continue if land use planning decisions continue to set aside lands (removed from the Management Unit).

Table 1 - Summary of Total Area Under Management

Comparison and Trend Analysis of Planned vs Actual Forest Operations Report for the Pic River Ojibway Forest

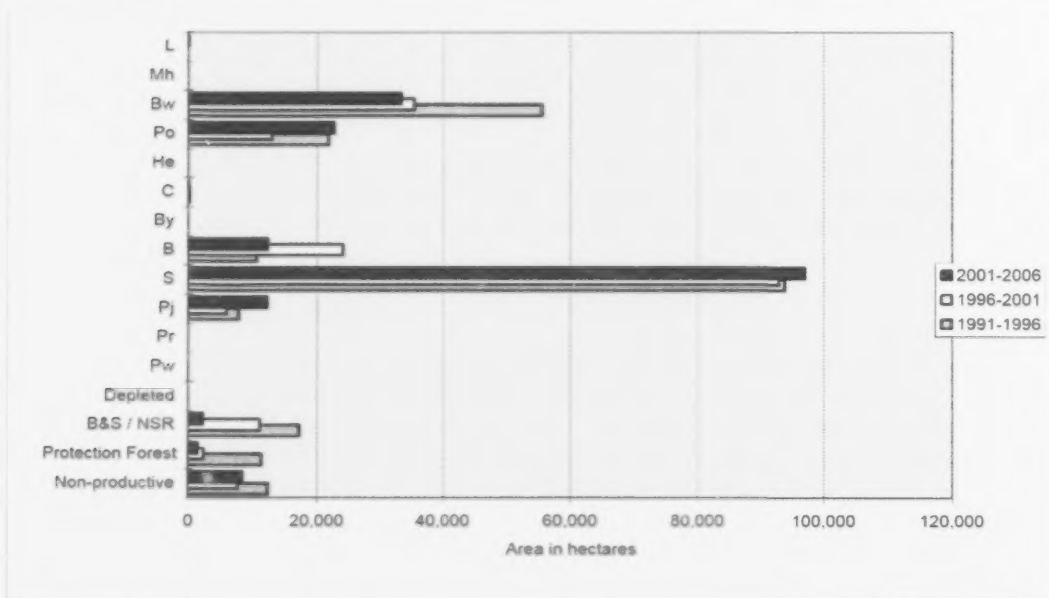
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Table 1 - Summary of Total Area Under Management

Past and Current Plans - Crown Managed

MU: Pic River Ojibway Forest

Land Type	Plan Term	Area in hectares		
		Past Plans		Current
		1991-1996	1996-2001	2001-2006
Non-Forested				
Other Land		1,112	1,558	1,460
Forested				
Non-productive		12,411	7,779	8,374
Productive				
Protection		11,325	2,411	1,471
Production Forest				
B&S / NSR		17,193	11,119	2,292
Depleted		-	-	-
Forest Stands by Working Group				
Pw		-	-	-
Pr		-	-	-
Pj		7,801	5,970	12,203
Sb		93,795	92,920	97,033
Sw		-	-	636
Bf		10,660	24,133	12,282
By		-	-	-
Ce		147	202	122
He		-	-	-
Po		21,923	12,984	22,732
Bw		55,592	35,386	33,357
Mh		-	-	-
L		-	-	111
Total Production Forest		207,111	182,714	180,768
Total Forested Land		230,847	192,904	190,613



Source: FMPM Table FMP-1, FMP-2
TMPM Table 4.8.2

Description of Forest Units

Table 2 presents a description of the forest units used in the 1991-1996, 1996-2001 and the 2001-2006 FMP's.

There were six forest units defined in the 1991-1996 FMP. The working group species was used as the primary descriptor for each forest unit (e.g. jack pine working group = Jack Pine 1 forest unit). The exception to this general trend is the combination of the black and white spruce working groups. The black spruce working group was grouped into two different forest units (SP1 and SP3), which was based on site class. The SP1 forest unit was site class X or 1, while the SP3 forest unit was site class 2, 3 or 4.

There was an increase from six forest units to nine forest units during the development of the 1996-2001 FMP. The forest units were of the same descriptor based on the working group species. In the development of the 1996-2001 FMP the forest units were all split using site class. For example, PJ1 was based on a jack pine forest unit and site class X or 1, while the PJ2 was based on a jack pine forest unit and site class 2 or 3. The exception to this trend was the addition of the BF forest unit which consisted of all stands with a BF working group.

There were ten forest units developed during the 2001-2006 FMP. The basic structure of the forest units changed during the FMP development. Generally the forest units followed pure conifer, pure hardwood or mixedwood compositions. The pure forest units (either conifer or hardwood) are based on the dominate species found in that forest unit, in addition to maintaining a predetermined percentage of the dominant working group. For example, Poplar Pure ~ Po $\geq$ 70%. The mixedwood stands are split up into either a conifer or hardwood dominated forest unit. This allows for better volume estimations and sustainable management of these forest types.

BFFUT, a new forest unit was created to account for the new stands that originate by harvest or natural causes after the start of the new planning term. The syntax of BFFUT is the same as BFMX. This new forest unit was created to differentiate stands that originated prior to and after the spruce budworm epidemic that occurred on the forest.

General Trends

- The forest units used during the 2001-2006 FMP in a more complex fashion portray current forest stand conditions and, allow for forest management to occur in mixed wood stands that exist on the forest.

Table 2 - Description of Forest Units (FMP-8)

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Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)

From the 2001 - 2006 FMP

Forest Unit		Forest Type	Main Working Group	Site Type(s)	Silvicultural System	FRI Parameters & Criteria	Additional Information
OC	Other Conifer	Conifer	La	17, 37	clear cut	(CE+LA=0.5) AND (WG=CE OR WG=LA)	*under 17 years old are mainly SPU/P plantations
SBL0W	Lowland Spruce	Conifer	Sb	34, 35, 36 12, 14, 20, 21, 22,	clear cut	(SB>0.6) AND (SB+CE+LA=1) AND (WG=SB AND AGE>17)	
SPUP	Upland Spruce	Conifer	Sb	25, 31, 32 12, 13, 14, 20, 22,	clear cut	(SB+SW>0.7) AND (PO+BW<0.2)	
PI/PUR	Jack Pine Pure	Conifer	Pj	25, 26, 31	clear cut	(Pj>0.7) AND (PO+BW<0.2)	
PO/PUR	Poplar Pure	Intolerant Hardwood	Po	16, 19, 28, 29, 32, 16, 19, 21, 23, 28,	clear cut	(PO>0.7)	
BFMX	Fir Mixwood	Mixwood	Bf	29, 32 12, 13, 14, 16, 17, 19, 20, 22, 25, 27,	clear cut	(BF>0.4) AND (BF+SB+SW+Pj>0.5)	
CONMX	Conifer Mix	Mixwood	Sb	28, 29, 33	clear cut	(SB+SW+Pj+BF+CE+LA>0.5)	
BW/PUR	Pure White Birch	Intolerant Hardwood	Bw	16, 19, 28, 29, 33	clear cut	(BW>0.6)	
HWDMX	Hardwood Mix	Mixwood	Bw	16, 19, 23, 28, 29, 16, 19, 21, 23, 28,	clear cut	(PO+BW>0.5)	
BITUT	Balsam Fir Future	Mixwood	Bf	29, 32	clear cut	SUCCESSION FROM BFMX	

Source: FMPM Table FMP-8

From the 1996 - 2001 FMP

Forest Unit		Forest Type	Main Working Group	Site Type(s)	Silvicultural System	FRI Parameters & Criteria	Additional Information
Pj1	Jack Pine 1	Conifer	Pj		clear cut	all stands in which working group is Jack Pine and the site class is X or 1	
Pj2	Jack Pine 2	Conifer	Pj		clear cut	all stands in which working group is Jack Pine and the site class is 2 or 3	
Sp1	Black Spruce 1	Conifer	Sb		clear cut	all stands in which working group is Black Spruce and the site class is X or 1	
Sp2	Black Spruce 2	Conifer	Sb		clear cut	all stands in which working group is Black Spruce and the site class is 2 or 3	
Bf	Balsam Fir	Conifer	B		clear cut	all stands in which working group is Balsam Fir	
Pop1	Poplar 1	Intolerant Hardwood	Po		clear cut	all stands in which working group is Poplar and the site class is X, 1, or 2	
Pop3	Poplar 3	Intolerant Hardwood	Po		clear cut	all stands in which working group is Poplar and the site class is 3	
Bw1	White Birch 1	Intolerant Hardwood	Bw		clear cut	all stands in which working group is White Birch and the site class is X, 1, or 2	
Bw3	White Birch 3	Intolerant Hardwood	Bw		clear cut	all stands in which working group is White Birch and the site class is 3	

Source: FMPM Table FMP-8

From the 1991 - 1996 FMP

Forest Unit		Forest Type	Main Working Group	Site Type(s)	Silvicultural System	FRI Parameters & Criteria	Additional Information
Pj	Jack Pine 1	Conifer	Pj		clear cut	all stands in which working group is Jack Pine	
Sp1	Spruce 1	Conifer	Sb		clear cut	all stands in which working group is Black Spruce and the site class is X or 1	
Sp3	Spruce 3	Conifer	Sb		clear cut	all stands in which working group is Black Spruce and the site class is 2, 3 or 4	
Bf	Balsam Fir	Conifer	B		clear cut	all stands in which the working group is Balsam Fir	
Pop1	Poplar	Intolerant Hardwood	Po		clear cut	all stands in which working group is poplar	
Bw1	White Birch	Intolerant Hardwood	Bw		clear cut	all stands in which working group is White Birch	

Source: FMPM Table FMP-8

Summary of Planned & Actual Harvest Volumes

Table 3 presents a summary of the planned and actual volumes for normal and salvage harvest areas. The actual volumes presented are the "utilized" volumes. The volumes for the 1991-1996 and the 1996-2001 periods have been annualized for both the planned and actual volumes as indicated in the tables.

For the 2001-2006 period, the planned harvest volume has been annualized for the five-year term, while the actual volumes have been annualized based on four-years of harvest, as the fifth year of the period has not currently been reported.

Planned volumes for normal harvest areas incorporate all the amendments made to the respective FMP's. The volumes also include salvage volumes harvested during the respective term.

When looking at the planned volumes there is a general trend for the volumes to be relatively stable for the first two terms (1991-1996 & 1996-2001) then drop sharply in the 2001-2006 term. The decrease in the forecast harvest volumes can partially be attributed to the change in the model used to calculate the annual allowable harvest. The first two terms (1991-1996 & 1996-2001) had their harvest level calculated using the Maximum Allowable Depletion Calculation (MADCALC). The 2001-2006 term had the harvest level calculated using the Strategic Forest Management Model (SFMM). The differences between the two different models and how the allowable harvest area is calculated, may have contributed to the variation between the second (1996-2001) and third (2001-2006) terms. An additional reason for the drop in the planned volumes the decrease in the amount of productive forest area. During the 1996-2001 planning term the Gravel River Portion of the forest was removed from the Forest. The actual realized harvest volumes increase between the first period to the second period, and drop in slightly in the third term.

The trend that is opposite to the rest of the decreasing trends is the increase in achievement of harvesting for each of the planning terms. The 1991-1996 planning term resulted in 36% of the forecasted volume being harvested. During the 1996-2001 planning term 43.6% of the forecasted volume was harvested. During the 2001-2006 planning term there the actual harvest volume was 54.7% of the forecasted volumes. This number is slightly inflated for the total volume as it includes the forecasted salvage and actual salvage volumes that occurred from the Nip 75 salvage operation.

There has been an issue questioning the accuracy of the yield curves for the forest by the harvest operators on the forest. In addition there has been an Independent Forest Audit Recommendation (#5) from 2001 indicating that improvement was needed in the Growth and Yield information for the Forest. An analysis was completed to evaluate the differences between the forecasted m³/ha and the actual m³/ha. Through this analysis it was shown that under the normal harvest conditions the forecasted volumes were approximately 20% higher than the realized volumes that were being delivered to the various mill destinations. The actual harvested percentages were between 16% and 29% lower than the forecasted realized volumes. Table 1 reflects these amounts for each of the three terms.

Table 3. Forecast vs. Actual Volumes (m³/ha).

Plan Term	Forecast m ³ /ha	Actual m ³ /ha	Difference
1991-1996	128	107	16%
1996-2001	109	77	29%
2001-2006	147	120	18%

General Trends

- The total forecasted volumes are relatively consistent between the first and second term, but drop significantly in the third term. The future term (2006-2011) indicates a similar forecasted harvest level as the third term. These changes can be attributed to the switch from MADCALC to SFMM.
- The actual harvested volumes between planning periods have been relatively consistent.
- The percentage of forecasted versus actual volume harvested is increasing from planning term to planning term. The harvested percentages are increasing from 36% to 55% over the scope of this trend analysis.
- The forecasted volumes are substantially higher than the realized volumes that are harvested and delivered from the Forest for the terms for the past 15 years.

Table 4 - Summary of Planned & Actual Harvest Volumes

2006 Independent Forest Audit
Table 3 - Summary of Planned & Actual Harvest Volumes
MU: Pic River Ojibway Forest

Average Planned Annual Harvest Volumes

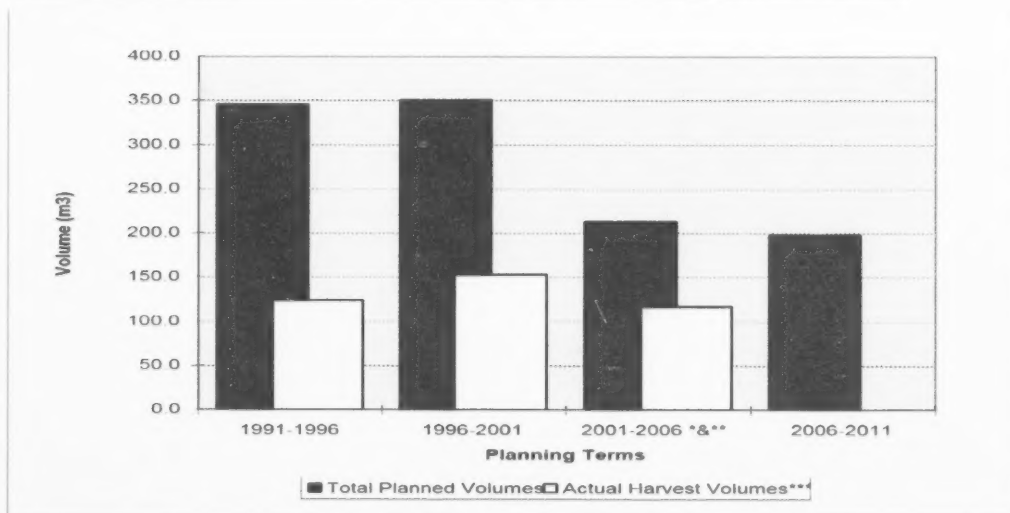
Volumes are Annualized for the indicated 5 year period

Species	Volume in '000's cubic metres		
	Past Plans		Current
	1991-1996	1996-2001	2001-2006
A Regular Harvest			
Pj	21,072	19,859	17,211
Sb	147,507	149,766	109,323
Sw	-	14,033	4,056
Bf	20,521	33,880	4,608
Ce	-	499	137
La	-	499	137
Po	60,589	51,891	45,729
Bw	95,723	80,040	31,631
Total Planned Volumes	345,412	350,467	212,832

Actual Harvest Volumes***

Volumes are Annualized for the indicated 5 year period

Species	Volume in '000's cubic metres		
	Past Plans		Current**
	1991-1996	1996-2001	2001-2006
A Regular Harvest			
Pj	17,971	18,958	8,905
Sb	91,830	105,788	53,695
Sw	-	-	-
Bf	7,727	4,409	1,950
Ce	-	45	-
La	-	-	15
Po	5,510	19,882	50,223
Bw	899	3,786	1,568
Total Actual Volumes	123,937	152,868	116,354



Source: planned: FMPM Table FMP-21

1996 FMPM RPFO-4 and annual reports, 2004 FMPM AR-4

* The 2001-2006 Actual Harvest Volumes are annualized based on 4-years of depletion.

**Current - Volumes include both normal and salvage operations (2001-2006)

Summary of Planned & Actual Depletion Area

The actual harvested area for each term varied from 35% to 61% of the forecasted level, for the planning term analyzed in this trend analysis. Currently the 2001 – 2006 planning term is at 35% of the forecasted area harvested which include salvage operations within Nip 75 salvage blocks. When including the salvage and natural depletion with the actual harvest level the achievement is 77% of the forecasted area. The actual harvest areas for the 2005 – 2006 year were unavailable during the preparation of this report. The following factors contributed to the actual harvest area falling below the planned area for the 2001 – 2006 planning term: Salvage operations combined with natural depletion (Nipigon Fire #75, difficult terrain, low quality stands, high component of white birch and local market conditions.

Nipigon Fire #75 resulted in changing the course of the operations being conducted on the Forest, contributing to lower than planned harvest levels. Once the salvage amendment was approved there was a redirection of harvest operations from normal operation into the salvage operation. This resulted in lower than normal productivity in the salvage areas due to low yield stands and the increase amount of road construction that was required to access the salvage area, as the majority of the area was inaccessible prior to the fire. The majority of the stands that were in the salvage area were naturally low volume stands prior to the fire. These naturally low volume stands led to a reduction in the area salvaged because the recoverable volume was not viable given the difficult terrain and operating costs. To replace the burnt allocations the planned contingency area was selected for harvest operations.

Fire salvage was new to the operators on the Forest and received direction and advice from other operators that have previously dealt with fire salvage. The earlier fire salvage efforts in the Northwest Region found that it took approximately one year for the bark to loosen from the black spruce boles, which could then be chipped easier while maintaining the chip quality. The company could not jeopardize the chip quality/flow to the pulp mills as the kraft process is very intolerant to the presence of any charcoal in the chips.

Due to the challenges of the local topography found on the Forest, the burnt wood blew down quicker than expected due to the shallow soils, making it more difficult to conduct salvage operations. This resulted in a lower amount of area being salvaged during the term.

In addition to the difficult terrain and the low quality stands that are present on the forest, there is also a large amount of white birch dominated stands that exist naturally on the forest. The amount of white birch that is present on the forest contributes to the amount of bypassed harvest area on the Forest, because the local markets are not sufficient to consume all of the white birch that is available on an annual basis. The local fuel wood market is able to consume a fair amount of the harvested white birch. The local markets are able to utilize the veneer quality logs, as well as, the number one (#1) quality logs that are produced, but there is no local market available for chips.

Regionally, there is a lack of local markets for white birch. Buchanan Forest Products Ltd. has sought out and obtained white birch export permits to the U.S.A. since 2000, in order to find markets for the white birch that is harvested on an annual basis. Even with the amount of white birch that the Company is able to export, there is more white birch available than there are markets for. This continues to result in increased bypass in areas that are white birch dominated areas.

With recent market developments, poplar utilization is decreasing in the area. There have been mill shutdowns that have affected the local markets, resulting in poplar dominated areas being bypassed. This is a short lived market trend, but has the ability to continue for a considerable amount of time if there are no new market opportunities in the area.

General Trends

- Normal harvest operations are significantly lower than the forecasted harvest operations.
- Areas that are dominated by white birch have been typically bypassed due to lack of local markets. Some of the harvested white birch is utilized locally through the fuel wood market, but there is more white birch available than the market are able to consume.
- The rugged terrain and the low volume stands that exist on the forest contribute to the amount of harvest bypass, resulting in increased bypass.
- The rugged terrain also increases the costs associated with road construction. There are also some areas that are unable to be accessed due to the difficult terrain encountered during road construction, resulting in increased bypass.

Table 5 - Summary of Planned & Actual Depletion Area

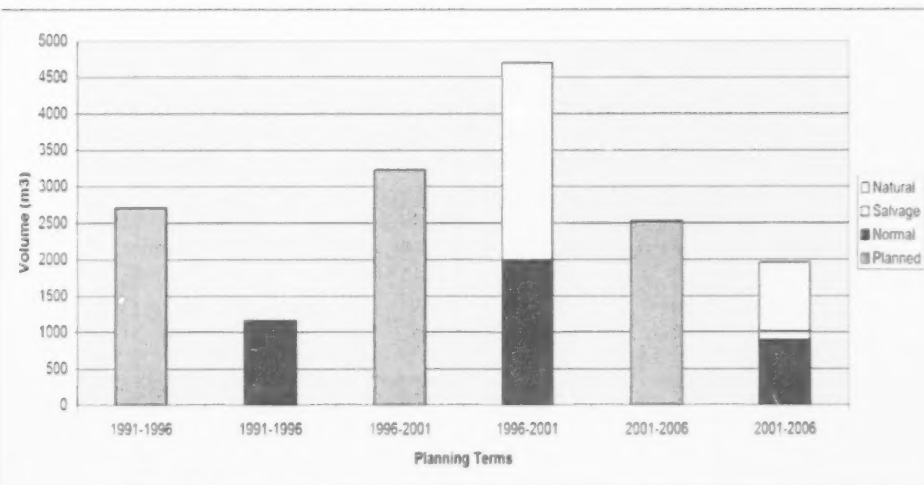
2006 Independent Forest Audit

Table 4 - Summary of Planned & Actual Depletion Area**Past and Current Plans****Pic River Ojibway Forest**

Area is Annualized for the indicated 5 year period

Forest Unit	Planned Annual Harvest Area				Actual Depletion Area						
	Area in hectares				Area in hectares						
	Past Plans		Current		Past Plans		Current				
	1991-1996	1996-2001	2001-2006	2001-2006	1991-1996	1996-2001	2001-2006	2001-2006	2001-2006	2001-2006	2001-2006
Plan Term	Planned	Planned	Planned	Planned - Salvage	Harvest	Natural	Harvest	Natural	Harvest	Salvage	Natural
BFFUT				66						18	
BFMX			49	81					25	5	
BWPUR			671	651					274	44	32
CONMX			297	76					224		
HWDIX											
OC			46	1					50		0
PJPUR			101	6					106	2	16
POPUR			75	7					77	6	
SBLOW			209	182					124	41	13
SPUP											
Sb1		767				522	713				
Sb2		499				398	540				
Bf		31				24	10				
Pj1		31				19	0				
Pj2		81				79	9				
SW		748				479	1,060				
Pa1		261				126	83				
Pa3		125				102	16				
Bw1		361				139	10				
Bw3		323				91	276				
Sp_1	516				647						
Sp_3	483										
B	384				173						
Pi	120				111						
Pa	340				94						
Bw	861				134						
Total Area	2,704	3,227	1,447	1,070	1,159	-	1,976	2,715	879	117	953

Planned vs. Actual Harvest Area



Source: planned: TMPM Table 4.15; FMPM Table FMP-18
 actual: TMPM Table 4.1; 1996 FMPM Table RPFO-2 and annual reports; 2004 FMPM AR 1 and AR 6
 *Actual Harvest Areas are annualized based on 4 years of depletion and include salvage areas from Fig. 75

Summary of Managed Productive Forest by Forest Unit

The purpose of Table 5 – Summary of Managed Productive Forest by Forest Unit is to address the changes in forest condition over time. Due to the different strategies and forest units of each of the various forest management plans it is quite difficult to detect any changes in forest unit and age class distribution utilizing the information available from past Forest Management Plans, Annual Reports, and the Report of Past Forest Operations. Over the past three planning terms, the land base has been changed slightly either through the creation or removal of new parks. The distribution of the productive forest has also changed over these planning terms as the forest units have continued to evolve and as the forest units are further refined.

The various land types that exist on the forest were grouped during the first two planning terms (1991-1996, 1996-2001), while during the 2001-2006 planning term the different land types were identified on FMP-9. This results in a more detailed description of the Forest's land base. Other variations between the amounts found in each forest unit or working group are the different queries that were utilized for each planning term. The differences in the forest unit syntax's are developed through the planning process and driven by management decisions.

As identified in the 2001 Independent Forest Audit, it was identified that there were problems found with the 1996-2001 Forest Management Plan. There were problems found with the planning inventory, as there was a reduction in the total forest area and a shift in the Working Group Composition calculated as a product of the 1988 Forest Resource Inventory.

The table below displays the conifer and hardwood percentages as the numbers from each respective planning term indicates.

Term	% Conifer	% Hardwood
1991-1996	60%	40%
1996-2001	73%	27%
2001-2006	75%	25%

General Trends

- A general trend that is seen when looking at the amount of productive forest area. The total amount of productive forest area has decreased from term to term, as either new parks or conservation reserves have been created or the boundaries of existing parks or conservation reserves have been readjusted.
- Another trend is that the amount of productive land that is conifer dominated increases for each of the planning terms. The increase goes from 60% to 75% in the 2001-2006 term. As the conifer continues to increase, the hardwood dominated stands decrease from 40% to 25 % in the 2001-2006 term.

Comparison and Trend Analysis of Planned vs Actual Forest Operations Report for the Pic River Ojibway Forest

Table 6 - Summary of Managed Productive Forest by Forest Unit (FMP-9)

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Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9)

1991-1996 Timber Management Plan

Forest Unit	Age Class	Protection Forest		Production Forest			
		(ha)	(m ³)	Unavailable		Stage of Management	Available
				(ha)	(m ³)		(ha) (m ³)
P1	B&S					Clearcut	1,563
	1-20						-
	21-40					Clearcut	17
	41-60					Clearcut	2,574
	61-80					Clearcut	3,793
	81-100					Clearcut	768
	101-120					Clearcut	431
	121+					Clearcut	218
Forest Unit Subtotal		-	-	-	-	-	9,364
SP-1	B&S					Clearcut	5,057
	1-20						-
	21-40					Clearcut	234
	41-60					Clearcut	6,093
	61-80					Clearcut	11,650
	81-100					Clearcut	6,218
	101-120					Clearcut	11,341
	121+					Clearcut	6,267
Forest Unit Subtotal		-	-	-	-	-	46,860
SP-2	B&S					Clearcut	5,057
	1-20						-
	21-40						-
	41-60					Clearcut	1,397
	61-80					Clearcut	4,958
	81-100					Clearcut	11,068
	101-120					Clearcut	13,715
	121+					Clearcut	20,845
Forest Unit Subtotal		-	-	-	-	-	57,040
BF	B&S					Clearcut	819
	1-20						-
	21-40					Clearcut	327
	41-60					Clearcut	3,291
	61-80					Clearcut	5,672
	81-100					Clearcut	736
	101-120					Clearcut	634
	121+						-
Forest Unit Subtotal		-	-	-	-	-	11,479
Oc	B&S						-
	1-20						-
	21-40						-
	41-60					Clearcut	25
	61-80					Clearcut	11
	81-100						-
	101-120						-
	121+					Clearcut	111
Forest Unit Subtotal		-	-	-	-	-	147
Po	B&S					Clearcut	2,041
	1-20						-
	21-40					Clearcut	179
	41-60					Clearcut	3,017
	61-80					Clearcut	6,196
	81-100					Clearcut	9,690
	101-120					Clearcut	2,841
	121+						-
Forest Unit Subtotal		-	-	-	-	-	23,964
Bw	B&S					Clearcut	2,656
	1-20						-
	21-40					Clearcut	631
	41-60					Clearcut	6,848
	61-80					Clearcut	10,530
	81-100					Clearcut	35,341
	101-120					Clearcut	1,322
	121+					Clearcut	920
Forest Unit Subtotal		-	-	-	-	-	58,248
Total		-	-	-	-	-	207,102

Source: FMPM Table FMP-9

2006 Independent Forest Audit**Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9)**

1996-2001 Forest Management Plan

2009-2013 Forest Management Plan								
Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m ³)	Unavailable		Stage of Management	Available	
				(ha)	(m ³)		(ha)	(m ³)
PJ	B&S					Clearcut	2,753	
	1-20						-	
	21-40					Clearcut	44	
	41-60					Clearcut	2,872	
	61-80					Clearcut	1,388	
	81-100					Clearcut	1,554	
	101-120					Clearcut	112	
Forest Unit Subtotal		-	-	-	-		8,723	-
SB	B&S					Clearcut	6,932	
	1-20						-	
	21-40					Clearcut	486	
	41-60					Clearcut	6,161	
	61-80					Clearcut	9,856	
	81-100					Clearcut	18,525	
	101-120					Clearcut	37,760	
Forest Unit Subtotal		-	-	-	-		99,852	-
BF	B&S					Clearcut	48	
	1-20						-	
	21-40					Clearcut	11	
	41-60					Clearcut	5,886	
	61-80					Clearcut	12,707	
	81-100					Clearcut	5,124	
	101-120					Clearcut	379	
Forest Unit Subtotal		-	-	-	-		24,181	-
CE	B&S						-	
	1-20						-	
	21-40						-	
	41-60						-	
	61-80						-	
	81-100					Clearcut	13	
	101-120					Clearcut	7	
Forest Unit Subtotal		-	-	-	-		168	-
I	B&S						-	
	1-20						-	
	21-40						-	
	41-60						-	
	61-80						-	
	81-100					Clearcut	34	
	101-120						-	
Forest Unit Subtotal		-	-	-	-		34	-
PO	B&S						-	
	1-20						-	
	21-40					Clearcut	12	
	41-60					Clearcut	1,324	
	61-80					Clearcut	3,972	
	81-100					Clearcut	6,496	
	101-120					Clearcut	1,180	
Forest Unit Subtotal		-	-	-	-		12,984	-
BW	B&S					Clearcut	1,386	
	1-20						-	
	21-40					Clearcut	580	
	41-60					Clearcut	4,132	
	61-80					Clearcut	4,232	
	81-100					Clearcut	20,136	
	101-120					Clearcut	6,218	
Forest Unit Subtotal		-	-	-	-		36,779	-
Total		-	-	-	-		183,721	-

Source: FMPM Table FMP-9

Comparison and Trend Analysis of Planned vs Actual Forest Operations Report for the Pic River Ojibway Forest

2006 Independent Forest Audit

Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9)

2001-2006 Forest Management Plan

Forest Unit	Age Class	Protection Forest		Production Forest				
		(ha)	(m ³)	Unavailable		Stage of Management	Available	
				(ha)	(m ³)		(ha)	(m ³)
OC	B&S							
	1-20							
	21-40							
	41-60							
	61-80					Clearcut	7	49
	81-100			13	377	Clearcut	50	1,450
	101-120	9	450	20	1,000	Clearcut	56	2,800
	121-140					Clearcut	44	2,376
	141-160	40	1,800	11	495	Clearcut	7	315
	161-	21	777	1	37	Clearcut	69	2,415
Forest Unit Subtotal		70	3,027	45	1,909		233	9,405
SBLW	B&S							
	1-20					Clearcut	81	
	21-40							
	41-60					Clearcut	334	
	61-80	9	135			Clearcut	605	9,075
	81-100			71	4,260	Clearcut	352	21,120
	101-120	12	1,140	44	4,180	Clearcut	883	83,885
	121-140	13	1,378	36	3,816	Clearcut	1,608	170,448
	141-160					Clearcut	1,964	202,292
	161-					Clearcut	14	980
Forest Unit Subtotal		34	2,653	151	12,256		5,841	487,800
SPUP	B&S			2,128				
	1-20			83		Clearcut	5,041	45,369
	21-40							
	41-60			96	3,648	Clearcut	1,608	61,104
	61-80			357	27,846	Clearcut	3,445	268,710
	81-100			581	67,977	Clearcut	3,463	405,171
	101-120			1,027	143,780	Clearcut	6,114	855,960
	121-140			720	97,200	Clearcut	4,801	648,135
	141-160	36	4,896	28	3,808	Clearcut	1,555	211,480
	161-							
Forest Unit Subtotal		36	4,896	5,020	344,259		26,027	2,495,929
FIPUR	B&S			52				
	1-20			4		Clearcut	4,473	-
	21-40					Clearcut	356	15,308
	41-60					Clearcut	95	10,830
	61-80			4	676	Clearcut	779	131,651
	81-100	6	1,050	62	10,850	Clearcut	1,201	210,175
	101-120					Clearcut	522	87,696
	121-140					Clearcut	16	1,472
	141-160			4	136	Clearcut	7	238
	161-							
Forest Unit Subtotal		6	1,050	126	11,662		7,449	457,370
POPUR	B&S			1				
	1-20					Clearcut	385	
	21-40					Clearcut		
	41-60					Clearcut	218	28,340
	61-80			276	45,540	Clearcut	1,523	251,295
	81-100			89	17,088	Clearcut	387	74,304
	101-120			19	3,363	Clearcut	662	117,174
	121-140					Clearcut	520	
	141-160							
	161-							
Forest Unit Subtotal		-	-	385	65,991		3,695	471,113

Comparison and Trend Analysis of Planned vs Actual Forest Operations Report for the Pic River Ojibway Forest

BFMX	B&S					Clearcut	163	
	1-20							
	21-40							
	41-60	34	1,258	85	3,145	Clearcut	1,652	61,124
	61-80	4	244	2,269	138,409	Clearcut	7,235	441,335
	81-100			482	38,560	Clearcut	2,568	205,440
	101-120			78	6,786	Clearcut	213	18,531
	121-140			32	2,336	Clearcut	240	17,520
	141-160							
	161+							
Forest Unit Subtotal		38	1,502	2,946	189,236		12,071	743,950
CONMX	B&S					Clearcut	17,231	
	1-20	132		691				
	21-40			46	460	Clearcut	-	
	41-60	28	924	639	21,087	Clearcut	4,736	156,288
	61-80	126	8,190	1,420	92,300	Clearcut	9,522	618,930
	81-100	196	19,012	3,322	322,234	Clearcut	13,782	1,336,854
	101-120	97	10,961	3,203	361,939	Clearcut	26,554	3,000,602
	121-140	-	-	2,085	202,245	Clearcut	10,250	944,250
	141-160	27	2,376	156	13,728	Clearcut	2,985	262,680
	161+			27	1,890			
Forest Unit Subtotal		606	41,463	11,589	1,015,883		85,060	6,319,604
BWPUR	B&S			106		Clearcut	1,569	-
	1-20			131				
	21-40			19		Clearcut	61	488
	41-60	28	124	67		Clearcut	1,359	58,437
	61-80	102	6,936	1,349		Clearcut	828	
	81-100	90	7,830	2,820		Clearcut	8,115	706,005
	101-120	215	20,640	1,682		Clearcut	7,044	676,224
	121-140			102		Clearcut	451	
	141-160					Clearcut	86	
	161+							
Forest Unit Subtotal		435	35,530	6,276	-		19,513	1,441,154
HWDMMX	B&S			127		Clearcut	5,143	
	1-20	13		88	1,320	Clearcut	120	1,800
	21-40			41	2,378	Clearcut	1,342	77,836
	41-60			743	66,870	Clearcut	2,469	222,210
	61-80	13	1,170	1,219	136,528	Clearcut	5,955	666,960
	81-100	220	24,640	413	47,495	Clearcut	3,918	450,570
	101-120			96	6,240	Clearcut	414	26,910
	121-140			2	54			
	141-160							
	161+							
Forest Unit Subtotal		246	25,810	2,729	260,885		19,361	1,446,286
BFTUT	B&S							
	1-20							
	21-40							
	41-60							
	61-80							
	81-100							
	101-120							
	121-140							
	141-160							
	161+							
Forest Unit Subtotal		-	-	-	-		-	-
Total		1,471	115,931	29,267	1,902,081		179,250	13,872,611

Source: FMPM Table FMP-9

Summary Report of Renewal, Tending and Protection Operations

Table 6 is the summary of renewal, tending and protection operations for the three planning terms that are within the scope of this IFA. These terms analyzed by the IFA are 1991-1996, 1996-2001 and the 2001-2006 planning terms. The table is annualized for comparison purposes and includes normal harvest, natural depletion (including salvage operations) and total area. There were no protection operations conducted during the scope of the audit. The planned renewal and tending operations include the FMP amendments that have been approved during the respective planning terms.

The level of achievement for silvicultural activities is directly related to the harvest level for each term, as the silviculture activities cannot be conducted until harvesting is completed. The largest single reason for the underachievement of the forecasted silviculture operations is the under harvest on the forest in each of the three terms.

The 1991-1996 term completed 62% of the forecasted tree plant, and 89% of the forecasted mechanical site preparation. There was 35% of the forecasted aerial spray completed during the term. The lower achievement of the forecasted aerial spray that was completed during the planning term, was a result of reassessing the areas of potential spray and determining that the site did not require a spray to achieve the regeneration standards.

Due to the large forest fires that occurred in the 1996-2001 and the 2001-2006 planning terms there is an increased amount of forecasted silviculture operations that have taken place compared to the 1991-1996 term. The amount of actual silviculture treatments are directly linked to the amount of salvage that was completed in each of these fires.

The 1996-2001 term completed 34% of the forecasted tree plant, 23% of the forecasted natural regeneration and 28% of the forecasted mechanical site preparation. The achievement of natural regeneration surveys were not completed during these terms, but the natural regeneration has taken place. There was 45% of the forecasted aerial spray completed during the term. Similar to the above term the achievement of aerial spray is based on the requirement of the aerial spray for the stand to achieve the desired regeneration standards.

The 2001-2006 term completed 102% of the forecasted tree plant, 31% of the forecasted mechanical site preparation and 88% of the forecasted chemical site preparation. There was 89% of the forecasted aerial spray completed during the term. The increase in the achievement levels of the tree plant, chemical site preparation and aerial spray can be directly related to the salvage operations that took place in the Nip 75 area. There was an increase in the available treatable areas due to the fire. There were areas that were treated with renewal operations that did not require salvage operations to occur as these were recent depletions or the fire burnt hot enough that the remaining volume was not sufficient to conduct salvage operations.

General Trends

- The level of achievement for silviculture operations is directly related to harvesting; as the harvest level increases the amount of silviculture operations increase. The opposite is also true. Therefore, the achievement of the forecasted silviculture is increasing through time.
- There is a decrease in the amount of mechanical site preparation, but there is an increase in the amount of chemical site preparation when looking at the three planning terms, due to the increase in direct planting taking place on the forest.

Table 7 - Summary Report of Renewal, Tending and Protection Operations (RPFO-7)

2006 Independent Forest Audit**Table 6 - SUMMARY REPORT OF RENEWAL, TENDING AND PROTECTION OPERATIONS (RPFO-7)**

	Area Summary of all Forest Units (ha)					
	Past Plan Term		Past Plan Term		Current Plan Term	
	Planned 1991-1996	Actual 1991-1996	Planned 1996-2001	Actual 1996-2001	Planned 2001-2006	Actual 2001-2006
Renewal						
Regeneration						
Uneven-Aged Management						
Selection Cut - Harvest						
Total Uneven-Aged Management						
Even-Aged Management						
Natural Regeneration						
Clearcut	2,146	-	1,551	362	1,300	-
Strip Cut						
Seed Tree Cut						
Uniform Shelterwood Seed Cut						
Subtotal Natural	2,146	-	1,551	362	1,300	-
Artificial Regeneration						
Planting	435	269	1,763	602	1,045	1,065
Seeding	15	-	160	-	60	-
Scarcification						
Subtotal Artificial	450	269	1,923	602	1,105	1,065
Total Even-Aged Management	2,595	269	3,474	963	2,405	1,065
Total Regeneration	2,595	269	3,474	963	2,405	1,065
Site Preparation						
Mechanical	310	275	1,634	458	724	224
Chemical	-	-	-	117	120	106
Prescribed Burn	700	-	1,384	-	-	-
Total Site Preparation	1,010	275	3,018	575	844	330
Tending						
Cleaning						
manual						
chemical - ground						
aerial	329	115	780	351	988	875
mechanical						
prescribed burn						
Spacing, pre-commercial thinning, improvement cutting						
even-aged						
uneven-aged						
Cultivation						
Total Tending	329	115	780	351	988	875
Protection (Insect Pest Control)						
accelerated harvest						
salvage						
manual protection						
ground insecticide						
aerial insecticide						
Total Protection						

Source:

planned: FMPM Table FMP-25

actual: 1996 FMPM Table RPFO-7 and annual reports: 2004 FMPM AR-7

The numbers in this table have been annualized.

Harvested Area Successfully Regenerated – Summary of All Forest Units

The intent of this table is to compare regeneration results with the harvest area from the indicated five-year period (1991-1996), where there has been enough time for the stands to have been successfully regenerated and have the Free-To-Grow (FTG) assessment be completed on these areas.

As indicated by the table there was 1,159 hectares harvested during this term, but there were no FTG surveys reported during this term. In the 2003-2004 year there were Free-to-Grow surveys conducted through aerial

surveys. Through ground truthing the results were found to be inaccurate. At this point both the MNR and Company came to the same conclusion and the FTG surveys were removed from the planning inventory. These areas were resurveyed during the 2005-2006, but the results will not be reported until the submission of the 2005-2006 Annual Report in November of 2006.

Currently the Company is working on a new FTG survey method that is a joint effort between Buchanan Forest Products Ltd., KBM Forestry Consultants and the MNR. The methodology that is being utilized is the LSP FTG Method. The preliminary findings from the 5,015 hectares surveyed in 2005 there were 4,674.6 hectares of area that met the FTG standards outlined in the 2001-2006 FMP. This resulted in 93% of the surveyed area being declared FTG. These results will be reported in the 2005-2006 Annual Report.

The objectives of this project are to establish a baseline of sound field measurements for FTG assessment and evaluate the potential for LSP procedures to minimize field procedures without sacrificing quality and to achieve higher levels of cost-effectiveness and timeliness.

Even though surveys have not been completed in the past, harvest areas are still being regenerated to the appropriate silviculture standards. The key shortfall is the FTG surveys that will give the final assessment of the silviculture standards being met. This issue has been acknowledged and the company has taken efforts to rectify this issue through the development of a new FTG survey methodology and through active FTG surveys. Presently approximately 5,000 hectares were assessed in 2005 and preliminary work has been completed on an additional 5,000 hectares in 2006.

General Trends

During the scope of the audit FTG surveys have not been completed by both the Company and MNR staff.

Conclusion:

- There is an increase in artificial regeneration (i.e. tree plant) from term to term, with the majority of the tree planting occurring in the PJPUR, SPUP and CONMX forest units. Jack pine and black spruce are the dominant species that have been planted on the forest during the scope of the audit.

There are now actual operations taking place to increase the amount of FTG activities being conducted on the forest with the development of the LSP methodology in the past couple of years. As a result of the 2003-2004 experience we have now conducted efficient and effective FTG surveys.

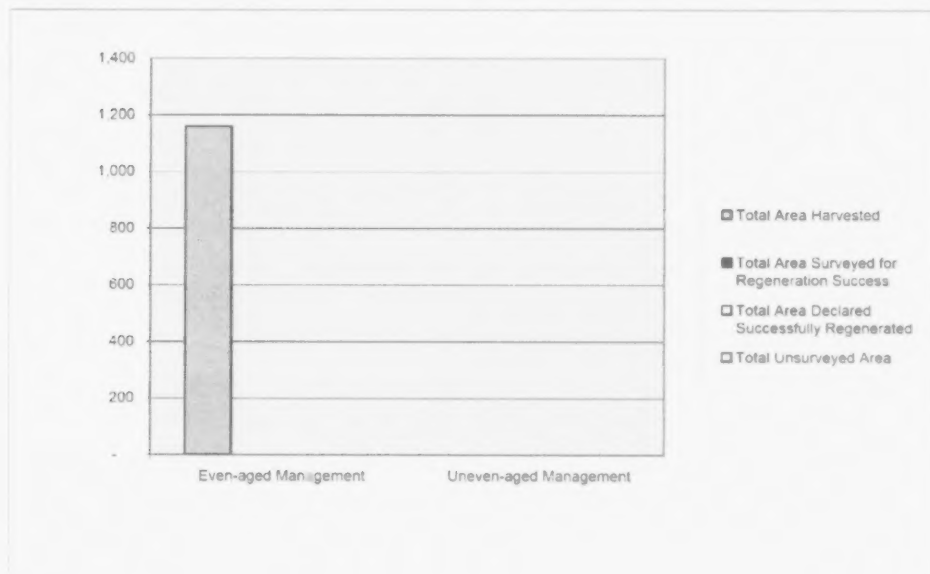
Table 8 - Harvested Areas Successfully Regenerated - Summary of All Forest Units

2006 Independent Forest Audit

Table 7 - Harvested Area Successfully Regenerated - Summary of All Forest Units

MU: Pic River Ojibway Forest

	AREA IN HECTARES (All Forest Units Combined)	AREA IN HECTARES (All Forest Units Combined)
	Even-aged Management	Uneven-aged Management
Total Area Harvested	1,159	-
Total Area Surveyed for Regeneration Success	-	-
Total Unsurveyed Area	-	-
Total Area Declared Successfully Regenerated	-	-
Total Area Surveyed Not Successfully Regenerated	-	-
NSR	-	-
B&S	-	-
Not Available for Regen. (eg Roads & landings)	-	-
Other	-	-
Percent of Area Surveyed Declared Successfully Regenerated		



Source:

total area harvested: FMPM Table RPFO-2, or annual reports
survey results: 1996 FMPM Table RPFO-8, RPFO-9, 2004 FMPM AR-7, AR-14, AR-16 and silviculture records

Appendix B

Audit Team Members and Responsibilities

Name	Role	Responsibilities	Credentials
John Cary, RPF	Lead Auditor	Overall audit coordination and oversight of activities of the audit team. Review of management objectives, contractual obligations, and forest sustainability.	R.P.F.; self-employed forestry and public policy consultant; auditor on fourteen Independent Forest Audits since 1999 (3 as lead auditor); reviewed Independent Forest Management Agreement Audits for MNR from 1990-1993 and reviewed IFAs for the Minister's staff from 1996-1998.
Dave West, RPF	Forest Management Planning Auditor	Audit Forest Management Planning requirements and public participation.	R.P.F.; 24 years of experience with forest industry in Ontario; Fifteen years of planning experience on seven management units across Northwestern Ontario.
Brad Chaulk, RPF	Harvesting Operations Auditor	Review harvest planning. Audit plan implementation, harvesting operations and compliance.	R.P.F.; 13 years of experience in the forestry sector; head of the Technical Services Division at KBM Forestry Consultants Inc.; member of six Independent Forest Audit teams; currently the plan author for the Black Sturgeon Forest 2006 to 2026 FMP and the lead author of the Silvicultural Ground Rules for the Dog River-Matawin Forest 2005-2025 FMP.
Bill Wiltshire, RPF	Silviculture Operations Auditor	Inspect renewal and silvicultural practices and related documentation.	R.P.F.; 25 years 13 years of experience in the forestry sector; principal of Wiltshire and Associates Forestry; auditor on 8 Independent Forest Audits.
Rod Seabrook, CEA (SFM), EMS (LA)	Wildlife/ Ecology Auditor	Inspect AOC documentation and practices. Audit aspects of forest management related to environmental and wildlife practices. Review access planning and implementation.	M.Sc. Biology, CEA(SFM), EMS(LA); 25 years forestry experience in Ontario; auditor on 13 Independent Forest Audits (nine as lead auditor), 38 ISO 14001 audits, 6 CSA Z809 audits, ten SFIS audits and one FSC audit.
Keith Hautala	Forest Modelling Auditor	Review the SFMM strategic planning for the FMP.	M.Sc.F.; post-graduate degree studying spatial habitat modeling; analyst to planning teams within Ontario and Manitoba with respect to forest inventory analysis, aspatial and spatial forest planning, and wildlife habitat analysis; formal training in SFMM and Patchworks models; member of four IFA teams.
Ben Newman, RPF	Secretariat	Coordinate audit logistics and report preparation. Review public commitments and document control.	R.P.F.; 11 years of forest management experience including authoring innovative silviculture and logging prescriptions and leading forest research and monitoring programs; Audit Secretariat on one Independent Forest Audit.

Appendix C
Independent Forest Audit Guiding Principles

Independent Forest Audit Guiding Principles

Guiding Principles within the Independent Forest Audit Process and Protocol

1. Commitment

Commitment is reflected in vision, mission and policy statements of the company. Vision and mission statements are intended to provide long-term guidance for the organization. Policy statements reflect how the organization's vision and mission will be achieved. These statements must be reflected in the day-to-day operations of the organization.

2. Public Participation

The process of sustainable forest planning, implementation and monitoring is conducted in an open consultative fashion, with input from all members of the planning team, Local Citizens Committee, native groups, and other parties with an interest in the operations of the forest unit.

3. Forest Management Planning

The forest management planning process involves the input of a number of individuals and groups to describe the current condition of the forest, the values and benefits to be obtained from the forest, the desired condition of the forest in the future, and the best methods to achieve that goal. Certain minimum standards and procedures have been established upon which all management units are evaluated.

4. Plan Implementation

Verification of the actual results of operations in the field compared to the planned operations is required to be able to assess achievement of the plan objectives and compliance with laws and regulations. In conjunction with the review of operations, the reporting tables are tested to ensure accurate results are reported.

5. System Support

System support concerns resources and activities needed to support plan implementation so as to achieve the desired objectives. Appropriate control, documentation and reporting procedures must be in place and operational. Planned action should occur at planned times, in planned places and to the planned degree.

6. Monitoring

The activities and the effects of these activities in achieving management objectives must be regularly measured and assessed. In particular, the indicators of achievement must be assessed and their effectiveness reviewed.

7. Achievement of the Management Objectives and Forest Sustainability

Periodic assessments of the management of the forest unit operations and the forest unit must be made in order to determine whether forest sustainability and other management objectives are being achieved. This includes comparing the actual values of the predetermined indicators against the planned values and assessing the reasons for any significant deviations.

8. Contractual Obligations

The licensee must comply with the specific licence requirements.

Appendix D
List of Acronyms

List of Acronyms

AHA	Available Harvest Area
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
CFSA	Crown Forest Sustainability Act
EA	Environmental Assessment
FIM	Forest Information Manual
FMNCP	Forest Management Native Consultation Program
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FOIP	Forest Operation Information Program
FOP	Forest Operation Prescriptions
FRI	Forest Resource Inventory
FTG	Free to Grow
FU	Forest Unit
GLSL	Great Lakes-St. Lawrence
HAT	Heritage Assessment Tool
HPA	High Priority Aspects
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
KBM	KBM Forestry Consultants Inc.
LCC	Local Citizens Committees
MAFA	Moose Aquatic Feeding Areas
MNR	Ministry of Natural Resources
MTR	Ministry of Tourism, Culture & Recreation
NDPEG	Natural Disturbance Pattern Emulation Guide
NIC	Not-in-Compliance
NRVIS	Natural Resource Values Information System
RBT	Resource-Based Tourism
RPF	Registered Professional Forester
RPFO	Report of Past Forest Operations
RSA	Resource Stewardship Agreement
SEV	Statement of Environmental Values
SEIM	Socio-Economic Impact Model
SFL	Sustainable Forest Licence
SFMM	Strategic Forest Management Model
SGR	Silviculture Ground Rules
STP	Silvicultural Treatment Package
TAR	Comparison and Trend Analysis of Planned versus Actual Forest Operations

Appendix E

Summary of Input to the Audit Process

Summary of Input to the Audit Process

General Public and Other Stakeholders

KBM solicited input into the audit via newspaper advertisements and direct mailings. The replies and conclusions of the audit team are as follows.

Issue or Comment	How Issue was Addressed by the Audit Team
2 responses were vague but positive	Not required.
3 organizations sent blank or irrelevant replies	Not required.
1 tourism operator encouraged the continued access to recreational opportunities on the Forest	Road access planning considered and observed in various operating areas.
3 people reported poor utilization on the Forest	Utilization was assessed on each harvest block within scope of the field audit. Recommendation 12 is related to this issue.
1 trapper was pleased with the help provided by MNR	Not required.
1 individual requested opportunities for small operators	Harvest licensing was assessed and found to comply with the requirements.
1 person wanted more opportunity for firewood harvest	MNR and Licensees questioned regarding issue. Audit team observed a sample of blocks where residual material was available.
2 trappers reported a decrease in the moose population near Prairie River	Strategic assessment of moose habitat and moose habitat within areas of operation were audited. Plans, prescriptions and operations were appropriate and had no significant impact.

Local Citizens Committee

On the evening of August 15, 2006, members of the audit team met with the Terrace Bay LCC. Part of the purpose was to determine how its members wished to be consulted. They indicated two methods. First they provided comments during the meeting. These issues and conclusions of the audit team are as follows.

Issue or Comment	How Issue was Addressed by the Audit Team
Appropriateness of lakeshore harvest	Riparian protection guidelines not assessed. Implementation of current guidelines was audited.
Private land management Compensation for harvest within traplines LCC effectiveness in provincial policy Complexity of forest management regulations Roadside slash can be used for electricity co-generation	Not required.
Road access restrictions	Road access planning considered and observed in various operating areas.
Notification of operations near traplines	Issue further discussed with individual, just prior to site visit. Sufficient notice was provided.
Road responsibility as outlined in 2006-2011 FMP was not discussed with the LCC	

Issue or Comment	How Issue was Addressed by the Audit Team
Utilization of wood directives	Issue investigated and reported in Section 3.8 Wood Supply Commitments. Consistent with the underutilization of the AHA, most of the wood supply commitments were not met. Recommendation 12 directs GWTL to utilize marketable timber left at roadsides.
Was amendment process for Nipigon 75 salvage too onerous	All amendments were audited and found to be in compliance with regulation and manuals.
Silviculture is lagging	Silviculture planning and implementation were audited, including numerous field sites. While many sites met the minimum prescribed standards, Recommendations 10, 15, 19 and 20 and Suggestions 5 and 10 are made by the audit team to ensure that operations are more effective.
LCC should be shown an example of an amendment in the field	MNR is aware of the request.
Fewer resources (especially funding) for LCC	The audit team assessed the effectiveness of the LCC. There were no deficiencies attributed to a lack of resources.

The second method of consultation that the LCC desired was to provide written comments before the field audit, and have the audit team follow up during the site visit.

Two members of the LCC planned to participate during the field audit, but were unable due to last minute commitments. A substitute could not be found.

Native Communities

The Aboriginal communities with interest in the Forest were contacted to identify whether they wanted to contribute to the audit. On behalf of the economic interest of Pic River, the Operations Manager for Pic River Development Corporation participated in the audit extensively.

Overlapping Licensees, Contractors and Commitment Holders

A representative from both overlapping licensees were present for the opening and closing meetings, as well as the field audit. They were able to answer detailed questions regarding the results of their operations.

SFL Holder

GWTL provided significant input to the audit process. This included providing background information and participating in the pre-audit, field audit and review of the audit report. The Silviculture Forester, Operations Forester, and former Planning Forester described the planning and operational history for each of the field sites audited. This allowed for a detailed review of the effectiveness of operations. Additional office interviews with other GWTL staff assisted with the completion of audit protocols. The closing meeting was well attended by GWTL staff including the Chief Forester and Vice President of Silviculture and Long-Term Fibre Supply. Clarification of factual information was provided in writing and during additional personal interviews while the audit report was reviewed.

Ministry of Natural Resources

MNR District staff including the Management Forester, Area Supervisor and Area Biologist attended various aspects of the audit, and provided input for the benefit of the audit team. A significant quantity of background information was gathered from MNR. The Management Forester and Area Biologist accompanied the audit team during the field audit to ensure the corroboration of facts regarding each site.

The Forest Management Branch Evaluation Team Leader attended the closing meeting in person and participated in the review of the audit report. Regional representatives including the Forest Program Specialist and Regional Analyst reviewed the audit report and provided additional background in writing and personal interviews during that period.

Appendix F
Public Survey

**KBM FORESTRY CONSULTANTS INC.
2006 INDEPENDENT FOREST AUDIT
PUBLIC SURVEY**



Every five years, as part of the Province's responsibility for resource management in Ontario, the Ministry of Natural Resources (MNR) contracts firms to evaluate forest management activities on Crown lands. KBM Forestry Consultants Inc. of Thunder Bay, Ontario has been engaged by MNR this year to conduct an independent forest audit of the Pic River Ojibway Forest for the 2001-2006 period.

As part of our evaluation, we would appreciate your input as a member of the public with an interest in forest management on the Pic River Ojibway Forest. If you have comments related to forestry activities during the five-year period April 1, 2001 to March 31, 2006, please complete and submit this form (please see back of sheet for more information on the audit process).

KBM provides this opportunity to comment on the Pic River Ojibway Forest audit, under the authority of Ontario Regulation 160/04 made under the Crown Forest Sustainability Act, 1994. Any personal information provided will be used solely by the audit team as input to the Pic River Ojibway Forest Independent Forest Audit. Any questions regarding the collection, use, and retention of the personal information can be directed to John Cary, Lead Auditor at 416-255-0385 (email: jcary@sympatico.ca) or to the company address indicated below.

Name:
(optional)

Tel. and/or email:
(optional)

What is your interest in forest management on the Pic River Ojibway Forest?

Recreation

☐

Employment (forestry, tourism, etc.)

☐

Conservation

☐

Other:

Can you identify any specific locations or activities on the Pic River Ojibway Forest that illustrate good OR poor management practices, and that the audit team should be aware of in conducting their evaluation? Please provide details.

Have you ever contacted forest managers with comments or concerns during the 2001-2006 audit period?

(e.g., local Ministry of Natural Resources, Great West Timber Limited) ☐ Yes ☐ No

If yes, were you satisfied with the response? ☐ Yes ☐ No

Feel free to add any additional comments (use additional sheet if required).

6. Please indicate if we may contact you for more information. ☐ Yes ☐ No

(If Yes ensure that you have provided your contact information above.)

Please **mail, email, or fax** the completed survey (Attention: Ben Newman) to the address/fax number below by **Monday, August 14, 2006.**

The survey can also be accessed through our website, located at www.kbm.on.ca

Although we cannot respond to everyone, we do take into consideration all comments received.
THANK YOU IN ADVANCE FOR YOUR INPUT.

KBM Forestry Consultants Inc.
bnewman@kbm.on.ca

349 Mooney Avenue
Thunder Bay, ON P7B 5L5
www.kbm.on.ca

Tel: (807) 345-5445 ext. 250
Fax: (807) 345-5858

INDEPENDENT FOREST AUDIT

Pic River Ojibway Forest

KBM Forestry Consultants Inc. has been retained by the Ministry of Natural Resources (MNR) to conduct an Independent Forest Audit, consistent with the Crown Forestry Sustainability Act, on the management of the Pic River Ojibway Forest.

The audit covers the April 1, 2001 to March 31, 2006 operating period. You are invited to comment on the forest management activities on the Pic River Ojibway Forest for this period of time. Please mail, email, or fax this form to:

Ben Newman
KBM Forestry Consultants Inc.
349 Mooney Ave., Thunder Bay, ON P7B 5L5
bnewman@kbm.on.ca
Tel: (807) 345-5445 ext. 250
Fax: (807) 345-5858
Toll-Free: 1-800-465-3001

(All correspondence sent to KBM is confidential).

Alternatively, comments can be made directly to the Local Citizens Committee:

Terrace Bay LCC
c/o Chris Magee, RPF - Ministry of Natural Resources
PO Box 280 - Terrace Bay, Ontario P0T 2W0
Tel: 807-825-3407
Fax: 807-825-3400
Email: chris.magee@mnr.gov.on.ca

(The privacy of any information given to the LCC may not be protected).

Comments must be received by **Monday, August 14, 2006.**

Purpose of the Independent Forest Audit

The Purpose of the audit is to assess:

- compliance with the *Crown Forest Sustainability Act*,
- compliance with the Forest Management Planning Process,
- a comparison of planned versus actual forest management activities,
- the effectiveness of forest management activities in achieving audit criteria and management objectives,
- assess the effectiveness of previous audit action plans, and
- where applicable, a licensee's compliance with the terms and conditions of the Sustainable Forest Licence.

The seven-member audit team will evaluate forest management planning and practices such as harvest operations, forest renewal activities, road construction and maintenance as well as opportunities for public input and First Nations consultation. The main objectives of the audit are to assess compliance with provincial laws and regulations as well as comment on the effectiveness and sustainability of forestry activities on the management unit.

In addition, the independent forest audit provides an opportunity to improve Crown land management in Ontario through adaptive management. The audits are conducted by consultants that are independent of the Ministry of Natural Resources and the companies being audited, and firms are selected in an arms-length process by the Forestry Futures Committee of Ontario.



INDEPENDENT FOREST AUDIT

Pic River Ojibway Forest

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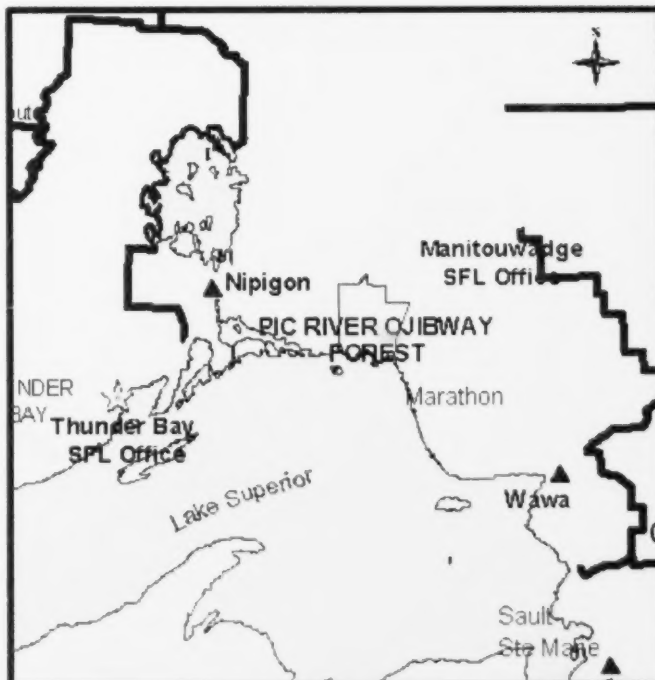
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Appendix G
Public Notification

PIC RIVER OJIBWAY FOREST INDEPENDENT FOREST AUDIT

KBM Forestry Consultants Inc. of Thunder Bay, Ontario has been retained by the Ontario Ministry of Natural Resources to conduct an Independent Forest Audit, consistent with the Crown Forest Sustainability Act, on the management of the Pic River Ojibway Forest. The purpose of the audit is to assess forest management activities within the Forest during the five year audit period of April 1, 2001 to March 31, 2006. Specifically:

- compliance with the Crown Forest Sustainability Act,
- compliance with the forest management planning process,
- a comparison of planned versus actual forest management activities,
- the effectiveness of forest management activities,
- the effectiveness of previous audit action plans, and,
- compliance with the terms and condition of the Sustainable Forest Licence.

You are invited to comment on forest operations on the Pic River Ojibway Forest for this period of time. Please provide your comments by Monday, August 14, 2006 to the audit team.

Mr. Ben Newman, RPF
KBM Forestry Consultants Inc.
349 Mooney Avenue
Thunder Bay, Ontario P7B 5L5
Tel: 807-345-5445 ext 250
1-800-465-3001
Fax: 807-345-5858
Email: bnewman@kbm.on.ca

Alternatively, comments can be sent to the Local Citizens Committee

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Ministry of Natural Resources
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The privacy of information given to the LCC cannot be guaranteed. All correspondence sent to KBM, however, is strictly confidential. For more information or to download and complete our public audit survey, please visit www.kbm.on.ca

PIC RIVER OJIBWAY FOREST INDEPENDENT FOREST AUDIT

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- compliance with the Crown Forest Sustainability Act,
- compliance with the forest management planning process,
- a comparison of planned versus actual forest management activities;
- the effectiveness of forest management activities;
- the effectiveness of previous audit action plans; and,
- compliance with the terms and condition of the Sustainable Forest Licence.

You are invited to comment on forest operations on the Pic River Ojibway Forest for this period of time. Please provide your comments by Monday, August 14, 2006 to the audit team:

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